Integrated Data Dictionary Edition 1.0 Draft

For NATO STANAG 4715

February, 2012

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Revision History

Version	Date	Document Status	Comments
0.1	20 July 2011	Initial Draft	
0.2	30 September 2011	TST Draft 2	• Included feedback from July 20-21, 2011 NATO STANAG 4715 TST Workshop. • Added a new section to support BEWL/BEI Products Data Elements
0.3	February 2012	TST Draft 3	• Included feedback from Oct 26-27, 2011 MASINT WG • Included updates to BEI Reporting

Contents

1 Overview v
2 Intended Audience v
3 IDD Organization and Structure vi
4 Transaction Information Record x
5 Contextual Element Categories x
6 Sources xi
7 Example xii
8 Contact Information xiii

List of Tables

Table 1. Transaction Subject Areas vi
Table 2. IDD Data Element Characteristics vii
Table 3. Type-2 Element Categories, Field ID Ranges and Descriptions x

List of Figures

Figure 1. IDD Data Constructs vi
Figure 2. Annotated Example of an IDD Page xii

1 Overview

This *Integrated Data Dictionary (IDD)* product is the authoritative source for North Atlantic Treaty Organization (NATO) biometrics data elements within the NATO Standardization Agreement (STANAG) 4715 by:

1. Identifying the high-value data exchanged across biometric systems from NATO member nations (both current and future),
2. Establishing authoritative definitions for those data, and
3. Documenting standards for them (for example, field size, character type and valid values).

The *Integrated Data Dictionary* defines the data standards that are to be used when data are exchanged among Biometric Systems that support NATO's missions.

The *Integrated Data Dictionary* also defines the data elements that are to be used to create Biometrically Enabled Watch Lists (BEWL) and Biometrically Enabled Intelligence (BEI) Products.

2 Intended Audience

The intended audience for the *Integrated Data Dictionary* is a wide one spanning representatives from the NATO Biometrics Community with a need to understand detailed data and their characteristics. This includes but is not limited to those responsible for biometric system design and development.

3 IDD Organization and Structure

IDD Structure. The NATO IDD is broken into two major sections:

- Transaction Element
- BEI Reporting

Within each section, to provide the necessary context, all the IDD elements are categorized into Subject Areas. Within each subject area, the IDD contains three types of data constructs: sets, information items, and standalone elements as shown in the figure below:

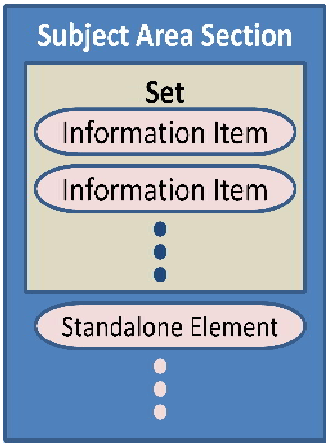

Figure 1. IDD Data Constructs

A set is a natural grouping of two or more elementary information items that are usually treated as single unit of information, such as “Domain Name” which consists of “Domain Implementation” and “Domain Implementation Version” information items.

A standalone element is a data element that is usually treated as a singular element, such as “Gender”. Neither an information item of a set nor a standalone element can be further decomposed. Because of this both are considered “data elements” within the IDD.

Transaction Element Subject Areas. The Transaction Element section of the IDD is divided into subject areas that correspond to the ANSI/NIST ITL Logical Record Types in Traditional Encoding referenced by the NATO STANAG 4715. The IDD contains data elements categorized within subject areas that are listed in the table below.

Table 1. Transaction Subject Areas

Subject Area	Description
Type-1 Transaction Information Record	Contains useful/required information items regarding the use or purpose of the transaction.

Subject Area	Description
Type-2 User-Defined Descriptive Text Record	Contains identification, biographic, and descriptive, information regarding the subject of the transaction and situational information regarding the encounter.
Type-10 Facial, Other Body Parts and SMT Image Record	Used for exchanging facial, other body parts and image data from scars, marks, and tattoos (SMT) with textual information.
Type-11 Reserved for Voice	This is a placeholder for future voice modality.
Type-13 Variable-Resolution Latent Image Record	Used for exchanging latent fingerprint image data with textual information.
Type-14 Variable-Resolution Fingerprint Image Record	Used for exchanging variable-resolution fingerprint image data, segmented flat fingerprint data, or major case print data with textual information.
Type-17 Iris Image Record	Used for exchanging iris image data.
Type-18 DNA Record	Used for exchange of DNA data.
Type-20 Source Representation Record	Contain the source representation(s) from which other Record Types were derived. Typically, one Type-20 source representation is used to generate one or more representations for use in other record types.
Type-21 Associated Context Record	Contain an associated context image, audio / visual recording or other related data. This record type does NOT contain information used to derive biometric information contained in other records.

BEI Reporting. This section of the IDD lists all the data elements referenced by the Biometrically Enabled Watchlist (BEWL) and Biometrically Enabled Intelligence (BEI) Reporting Formats and Data Elements section of the NATO STANAG 4715.

IDD Data Element Characteristics. The following table lists the data element characteristics captured in the IDD and to which types of data construct the characteristic applies.

Table 2. IDD Data Element Characteristics

Characteristic	Description	Set	Info Item	Stand-alone
Field ID	The field number assigned to the data element for that logical record type. (*Applicable to the Transaction Element section only*)	X	X	X

Characteristic	Description	Set	Info Item	Stand-alone
Field Name	Name of the dictionary element. The element name is intended to be human readable.	X	X	X
Mnemonic	The short name assigned to the data element for that logical record type. (*Applicable only to the Transaction Element section only*.)	X	X	X
Description	Textual description or definition for the dictionary element	X	X	X
Remarks	Comments, Notes, Examples, etc.	X	X	X
Format	Data format for the element. (e.g. YYYYMMDD for Date Value)		X	X
Number of Information Items	The number of information items within a data set. The value will be 0 for a standalone dictionary element or an information item of a set. The value will be 1 or greater for a set. (*Applicable only to the Transaction Element section only*.)	X		
Number of Characters Allowed	Minimum and Maximum number of characters per occurrence. The size is only pertinent to the dictionary element. Field identifier tags and separators are not accounted for.		X	X
Character Type Allowed	Type of allowable characters such as alpha, numeric, special or binary. A = Alphabetic N = Numeric S = Special B = Binary H = Hexadecimal U = Unicode Combination of alpha, numeric, and special characters is also supported. For example: "AN" means the field can support both Alphabetic and Numeric characters.		X	X
Special Characters	Allowable characters that is neither alphanumeric nor binary, such as punctuation characters. For example: Period, Comma, Minus, Plus, Hyphen		X	X
Value Constraint	Constraints that restrict the value captured by the data element (*Applicable only to the Transaction Element section only*.)		X	X

Characteristic	Description	Set	Info Item	Stand-alone
Look Up Codes	Type name containing the allowable codes for the dictionary element and a short description of the code and all the associated codes		X	X

4 Transaction Information Record

The Type-1 logical record primarily contains information regarding the transaction and exchange control. It is mandatory in all transactions and only one Type-1 record shall be present per transaction. Data for all fields in Record Type-1 shall always be encoded in ASCII format. There is no user-defined field allowed in Record Type-1.

5 Contextual Element Categories

The Type-2 logical record is used to capture user defined descriptive fields that provide context for the information within the transaction submitted. It is comprised of data elements that describe the subject, the encounter when the biometric data was collected, and processing and handling information regarding the transaction.

These contextual elements are logically grouped into the different categories. Field ID ranges have been assigned to these categories to facilitate identification and management of the Type-2 data elements.

Table 3. Type-2 Element Categories, Field ID Ranges and Descriptions

Category	Range	Description
Record	001 - 002	Required elements for the ANSI/NIST ITL Traditional Encoding format
File	003 - 099	Information regarding the submission file itself
Latent File	100 - 199	Information specific to the latent submission file
Biographic	200 - 299	Descriptive physical and personal information about the biometric subject
Encounter	300 - 399	Descriptive information about the collection encounter
Result/Response	400 - 499	Information regarding the outcome of the submission request
Processing/Handling	500 - 599	Information regarding how the transaction should be treated

6 Sources

The primary sources used for development of the *Integrated Data Dictionary Edition 1.0* for the NATO STANAG 4715 are:

Biometric Transaction Data Elements Section

- NATO STANAG 4715 (Edition 1 Draft February, 2012)
- ANSI/NIST-ITL 1-2011 (Final Approved, November, 2011)
- Interpol Implementation of ANSI/NIST ITL 1-2007 Version No. 5.03 – May 24, 2011
- DoD EBTS v3.0, BIMA-STB-STD-11-00 (8 December 2011)
- DoD Integrated Data Dictionary V5.0, BIMA-STB-STD-11-00.2 (8 December 2011)
- NATO STANAG 1059 (Edition 8, 19 February 2004): National Distinguishing Letters for use by NATO Armed Forces (Trigram Country Codes)
- NATO STANAG 2116 (Edition 5, 1992): NATO Codes for Grades of Military Personnel

BEWL/BEI Products Data Elements Section

- NATO STANAG 4715 (Edition 1 Draft February, 2012)
- NATO Allied Doctrine for Joint Operations, AJP-3(A), July 2007
- NATO Security Committee, Directive on the Security of Information, AC/35-D/2002-REV2, 4 February 2005

7 Example

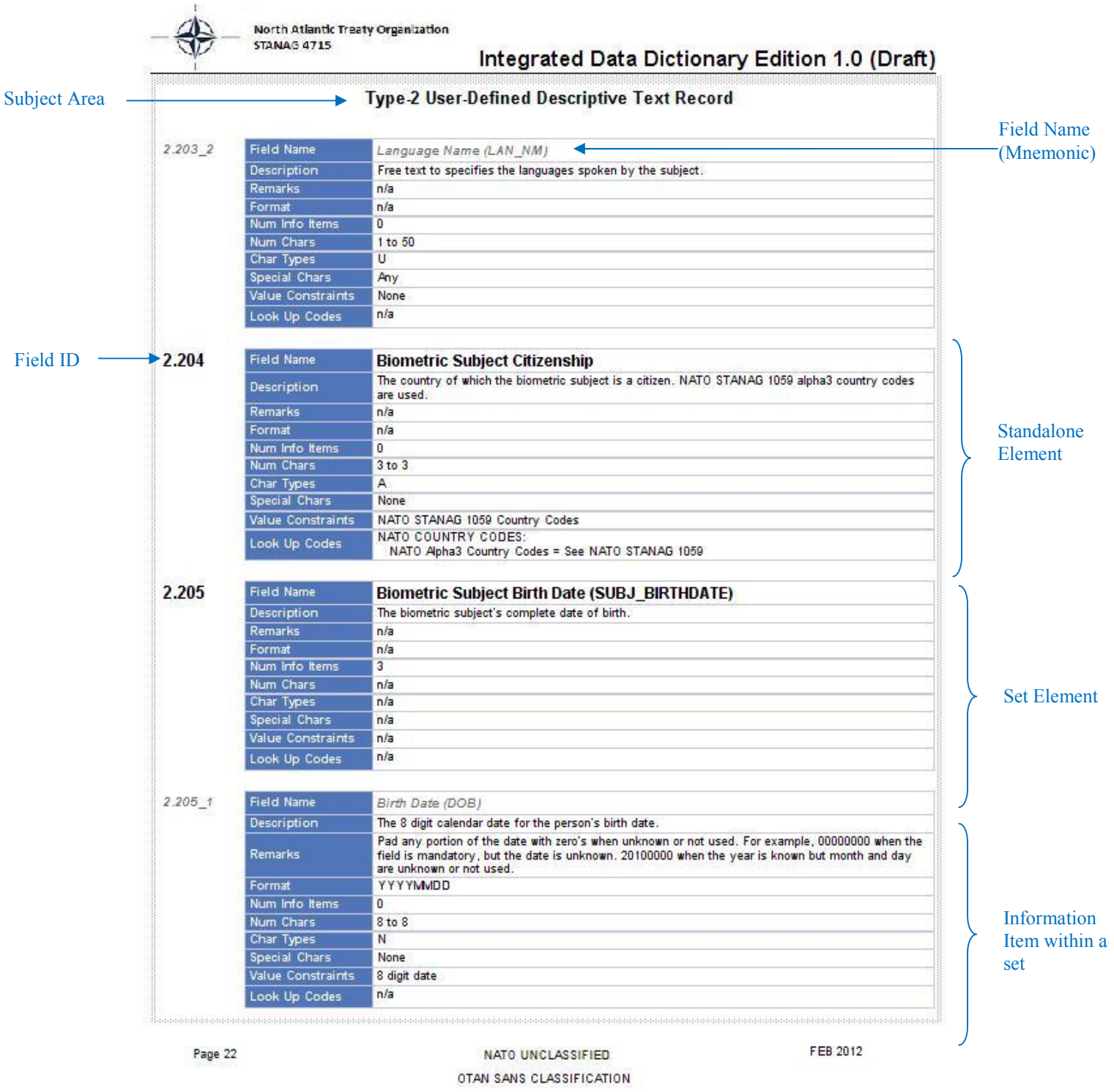
North Atlantic Treaty Organization
STANAG 4715
Integrated Data Dictionary Edition 1.0 (Draft)
Subject Area
Type-2 User-Defined Descriptive Text Record
Field Name (Mnemonic)
2.203_2
Field Name: Language Name (LAN_NM)
Description: Free text to specifies the languages spoken by the subject.
Remarks: n/a
Format: n/a
Num Info Items: 0
Num Chars: 1 to 50
Char Types: U
Special Chars: Any
Value Constraints: None
Look Up Codes: n/a
Field ID
2.204
Field Name: Biometric Subject Citizenship
Description: The country of which the biometric subject is a citizen. NATO STANAG 1059 alpha3 country codes are used.
Remarks: n/a
Format: n/a
Num Info Items: 0
Num Chars: 3 to 3
Char Types: A
Special Chars: None
Value Constraints: NATO STANAG 1059 Country Codes
Look Up Codes: NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059
Standalone Element
2.205
Field Name: Biometric Subject Birth Date (SUBJ_BIRTHDATE)
Description: The biometric subject's complete date of birth.
Remarks: n/a
Format: n/a
Num Info Items: 3
Num Chars: n/a
Char Types: n/a
Special Chars: n/a
Value Constraints: n/a
Look Up Codes: n/a
Set Element
2.205_1
Field Name: Birth Date (DOB)
Description: The 8 digit calendar date for the person's birth date.
Remarks: Pad any portion of the date with zero's when unknown or not used. For example, 00000000 when the field is mandatory, but the date is unknown. 20100000 when the year is known but month and day are unknown or not used.
Format: YYYYMMDD
Num Info Items: 0
Num Chars: 8 to 8
Char Types: N
Special Chars: None
Value Constraints: 8 digit date
Look Up Codes: n/a
Information Item within a set
Page 22
NATO UNCLASSIFIED
OTAN SANS CLASSIFICATION
FEB 2012

Figure 2. Annotated Example of an IDD Page

8 Contact Information

NATO STANAG 4715 TST Lead:
Mr. Thomas D'Agostino,
Tel. +1-703-607-1951
E-Mail: thomas.dagostino@us.army.mil

Technical Point of Contact:
Mr. Matthew Young, TST Support
Tel. +1-703-607-2043
E-Mail: matthew.r.young4.ctr@us.army.mil OR young_matthew@bah.com

BEWL/BEI Products Contact:
Mr. Kevin White, Intelligence Lead
Tel. +1-434-951-1562
E-Mail: kevin.b.white@us.army.mil OR kwhite@mitre.org

Type-1 Transaction Information Record

1.001

Field Name	Record Header (LEN)
Description	The record header appears as the first field (xx.001) in each Record Type. It contains information particular to the encoding format chosen, in order to enable proper reading of the record. In Traditional encoding, this field contains the record length in bytes (including all information separators). In NIEM-conformant XML encoding, this field contains the RecordCategoryCode, which is the numeric representation of the Record Type.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	N
Special Chars	None
Value Constraints	Depending Upon Encoding
Look Up Codes	n/a

1.002

Field Name	Version Number (VER)
Description	This mandatory four-character ASCII value shall be used to specify the current version number of the standard implemented by the software or system creating the transaction.
Remarks	The format of this field shall consist of four numeric characters. The first two characters shall specify the major version number. The last two characters shall be used to specify the minor revision number.
Format	####
Num Info Items	0
Num Chars	4 to 4
Char Types	N
Special Chars	None
Value Constraints	VER = 0500
Look Up Codes	n/a

1.003

Field Name	Transaction Content (CNT)
Description	This mandatory field shall list and identify each of the records in the transaction by record type and its IDC value. It also specifies the order in which the remaining records shall appear in the file. It shall consist of two or more subfields. The first subfield shall relate to this Type-1 record. Each of the remaining subfields corresponds to a single Type-2 through Type-99 record contained in the transaction.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-1 Transaction Information Record

1.003_1a

Field Name	*First Record Category Code (FRC)*
Description	The first information item (record category code / REC) within the first subfield shall be “1”. This indicates that the first record in the transaction is a Type-1 record consisting of header information.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	REC = 1
Look Up Codes	n/a

1.003_1b

Field Name	*Content Record Count (CRC)*
Description	The second information item of the first subfield of Field 1.003 File Content shall be the sum of the Type-2 through Type-99 logical records contained in this file. This number is also equal to the count of the remaining subfields of Field 1.003. The maximum value for CRC is 999.
Remarks	
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	CRC = count of record types 2 through 99; min = 1; max = 999; positive integer
Look Up Codes	n/a

1.003_2a

Field Name	*Record Category Code*
Description	The first information item of the second and remaining subfields of Field 1.003 File Content shall be the record identifier character(s) chosen from Table 1 of the ANSI/NIST ITL 1-2011 standard that identifies the record type approved by the NATO STANAG 4715.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	REC = 2, 10, 13, 14, 17, 18, 20, 21; integer
Look Up Codes	NATO STANAG 4715 APPROVED LOGICAL RECORD NUMBER CODES: 1 = Transaction information 2 = User-defined descriptive text 10 = Facial & SMT image 13 = Variable-resolution latent image 14 = Variable-resolution fingerprint image 17 = Iris image 18 = DNA Data 20 = Source Representation 21 = Associated Context

Type-1 Transaction Information Record

1.003_2b

Field Name	*Information Designation Character (IDC)*
Description	Each of the records present in a transaction, with the exception of the Type-1 record, shall include a field (xx.002) containing the information designation character / IDC. The value of the IDC shall be a sequentially assigned positive integer starting from zero and incremented by one up to a maximum of 99. IDC references are stated in Type-1 Field 1.003 Transaction content / CNT and shall be used to relate information items in the CNT field of the Type-1 record to the other records in the transaction. Two or more records may share a single IDC solely to identify and link together records that pertain to different representations of the same biometric trait.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 < IDC < 99; integer
Look Up Codes	n/a

1.004

Field Name	**Type of Transaction**
Description	This mandatory field shall contain an identifier, which designates the type of transaction and subsequent processing that this file should be given.
Remarks	The TOT shall be in accordance with definitions provided by the Domain and/or Application Profile.
Format	n/a
Num Info Items	0
Num Chars	3 to 4
Char Types	A
Special Chars	None
Value Constraints	See the specific Domain and/or Application Profile referenced.
Look Up Codes	NATO STANAG 4715 APPROVED TYPES OF TRANSACTIONS (TOT) CODES: NES = NATO Enrollment Submission NSR = NATO Submission Results NESE = NATO Enrollment Submission Error NLS = NATO Latent Submission NLR = NATO Latent Results

1.005

Field Name	**Date (DAT)**
Description	This mandatory field shall contain the local date that the transaction was submitted.
Remarks	Reference Annex B (traditional encoding) and Annex C (xml encoding) from ANSI/NIST ITL 1-2011 for more detail.
Format	YYYYMMDD - for Traditional Encoding
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

Type-1 Transaction Information Record

1.006

Field Name	Priority
Description	This optional field shall contain a single information character to designate the urgency with which a response is desired. Five levels will be supported by the NATO STANAG 4715 Edition 1 with Level 1 being the highest and Level 5 being the default.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	1 <= PRY <= 5
Look Up Codes	n/a

1.007

Field Name	Destination Agency Identifier
Description	This mandatory field shall contain the identifier of the administration or organization designated to receive the transmission.
Remarks	A 9 character ORI will be used by the NATO STANAG 4715. The first 3 characters will be country code from NATO STANAG 1059. Each country has the flexibility of how to populate the remaining 6 characters.
Format	<3 chars NATO STANAG 1059 Code><6 chars code assigned by originating country>
Num Info Items	0
Num Chars	9 to 9
Char Types	ANS
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

1.008

Field Name	Originating Agency Identifier
Description	The mandatory origination field shall contain the ORI identifying the agency or organization submitting the transaction.
Remarks	A 9 character ORI will be used by the NATO STANAG 4715. The first 3 characters will be country code from NATO STANAG 1059. Each country has the flexibility of how to populate the remaining 6 characters.
Format	<3 chars NATO STANAG 1059 Code><6 chars code assigned by originating country>
Num Info Items	0
Num Chars	9 to 9
Char Types	ANS
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-1 Transaction Information Record

1.009

Field Name	Transaction Control Number
Description	This mandatory field shall contain the Transaction Control Number as assigned by the originating agency. A unique control number shall be assigned to each transaction. For any transaction that requires a response, the respondent shall refer to this number in communicating with the originating agency.
Remarks	The NATO STANAG 4715 will be using a 23 characters TCN. The first 9 characters will be the ORI and the next 14 characters will be the Date/Time expressed as GMT.
Format	<9 chars ORI><YYYYMMDDhhmmss>
Num Info Items	0
Num Chars	23 to 23
Char Types	ANS
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

1.010

Field Name	Transaction Control Reference
Description	This optional field shall be used for responses that refer to the TCN of a previous transaction involving an inquiry or other action that required a response.
Remarks	The NATO STANAG 4715 will be using a 23 characters TCR. The first 9 characters will be the ORI and the next 14 characters will be the Date/Time expressed as GMT.
Format	<9 chars ORI><YYYYMMDDhhmmss>
Num Info Items	0
Num Chars	23 to 23
Char Types	ANS
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

1.011

Field Name	Native Scanning Resolution (NSR)
Description	This mandatory field shall be set to “00.00” if there are no Type-4 records in the transaction. When there are Type-4 records present, this field is used to specify the native scanning resolution of the friction ridge image capture device. This field shall specify the resolution in pixels per millimeter. The resolution shall be expressed as two numeric characters followed by a decimal point and two more numeric characters.
Remarks	n/a
Format	##.##
Num Info Items	0
Num Chars	5 to 5
Char Types	NS
Special Chars	Period
Value Constraints	NSR = 00.00 if no Type-4 records in transaction; otherwise xx.xx
Look Up Codes	n/a

Type-1 Transaction Information Record

1.012

Field Name	Nominal Resolution (NTR)
Description	This mandatory field shall be set to “00.00” if there are no Type-4 records in the transaction. When there are Type-4 records present, this field specifies the nominal resolution for the image(s) being exchanged. This field shall specify the resolution in pixels per millimeter. The resolution shall be within the range 19.30 ppmm (490 ppi) to 20.08 ppmm (510 ppi).
Remarks	n/a
Format	##.##
Num Info Items	0
Num Chars	5 to 5
Char Types	NS
Special Chars	Period
Value Constraints	NTR = 00.00 if no Type-4 records in transaction; otherwise xx.xx
Look Up Codes	n/a

1.013

Field Name	Domain Name (DOM)
Description	This optional field identifies the domain name for the user-defined Type-2 record implementation.
Remarks	This field is mandatory for the NATO STANAG 4715.
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

1.013_1

Field Name	*Domain Name Implementation (DNM)*
Description	The mandatory first information item (domain name / DNM) will uniquely identify the agency, entity, or implementation used for formatting the fields in the Type-2 record.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	ANS
Special Chars	Any
Value Constraints	DNM = NATO STANAG 4715
Look Up Codes	n/a

Type-1 Transaction Information Record

1.013_2

Field Name	*Domain Name Implementation Version (DVN)*
Description	An optional second information item shall contain the unique version of the particular implementation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	ANS
Special Chars	Any
Value Constraints	DVN = 1.0
Look Up Codes	n/a

1.014

Field Name	**Greenwich Mean Time (GMT)**
Description	This field provides a mechanism for expressing the date and time in terms of universal Greenwich Mean Time (GMT) units. This time is independent of the actual time zone where the time and date is recorded. The data is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	This field is mandatory for NATO STANAG 4715.
Format	YYYYMMDDhhmmssZ - for Traditional Encoding
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

1.015

Field Name	**Character Encoding (DCS)**
Description	This field specifies the character encoding that may appear within this transaction for data with the character type listed as “U” or 'user-defined' in "Char Types". The default character encoding for the Traditional Encoding is 7-bit ASCII. For XML, it is UTF-8.
Remarks	For Traditional Encoding, the NATO STANAG 4715 will use UTF-8 for character encoding for Logical Record Type 2 and above. Type-1 requires to use 7bit ASCII.
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-1 Transaction Information Record

1.015_1

Field Name	*Character Encoding Set Index (CSI)*
Description	This first information item of Field 1.015 DCS is the identifier for the character set index number that references an associated character set throughout the transaction file.
Remarks	Index Code '1' for 8 bit Latin has been deprecated and should not be used.
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	CSI = 3
Look Up Codes	TRANSACTION CHARACTER SET INDEX CODES: 0 = ASCII - 7 bit (Default) with zero added in high bit position 1 = 8 bit Latin - Deprecated 2 = UTF-16 - 16 bit 3 = UTF-8 - 8 bit 4 = UTF-32 - 32 bit 5-127 = Reserved for ANSI/NIST future use 128-999 = User-defined character sets

1.015_2

Field Name	*Character Encoding Set Name (CSN)*
Description	The second information of Field 1.015 DCS item shall be the common name for the character set associated with that index number.
Remarks	Character Set Name '8-bit Latin' has been deprecated and should not be used.
Format	n/a
Num Info Items	0
Num Chars	1 to 16
Char Types	ANS
Special Chars	Any
Value Constraints	CSN = UTF-8
Look Up Codes	TRANSACTION CHARACTER SET NAME CODES: ASCII = 7-bit English (Default) 8-bit Latin = Deprecated UTF-16 = 16-bit UTF-8 = 8-bit UTF-32 = 32 bit

1.015_3

Field Name	*Character Encoding Set Version (CSV)*
Description	The optional third information item of Field 1.015 DCS is the specific version of the character set used. In the case of the use of UTF-8, this information item can be used to hold the specific version of the character set used with UTF-8, so that the display terminal can be switched to the correct font family.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 16
Char Types	ANS
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-1 Transaction Information Record

1.017

Field Name	Agency Names (ANM)
Description	This optional field is comprised of two optional information items. The first is the destination agency name / DAN. This corresponds to the agency listed in Field 1.007 Destination agency identifier / DAI. The second optional information item is the originating agency name / OAN. This corresponds to the agency listed in Field 1.008 Originating agency identifier / ORI. Both information items are alphanumeric and can have any special characters in the names.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	None
Look Up Codes	n/a

1.017_1

Field Name	*Destination Agency Name (DAN)*
Description	The name of the administration or organization designated to receive the transmission.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	1 to -
Char Types	ANS
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

1.017_2

Field Name	*Originating Agency Name (OAN)*
Description	The name of the administration or organization originated the transmission.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	1 to -
Char Types	ANS
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.001

Field Name	Record Header (LEN)
Description	The record header appears as the first field (xx.001) in each Record Type. It contains information particular to the encoding format chosen, in order to enable proper reading of the record. In Traditional encoding, this field contains the record length in bytes (including all information separators). In NIEM-conformant XML encoding, this field contains the RecordCategoryCode, which is the numeric representation of the Record Type.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

2.002

Field Name	Information Designation Character (IDC)
Description	Each of the records present in a transaction, with the exception of the Type-1 record, shall include a field (xx.002) containing the information designation character / IDC. The value of the IDC shall be a sequentially assigned positive integer starting from zero and incremented by one up to a maximum of 99. IDC references are stated in Type-1 Field 1.003 Transaction content / CNT and shall be used to relate information items in the CNT field of the Type-1 record to the other records in the transaction. Two or more records may share a single IDC solely to identify and link together records that pertain to different representations of the same biometric trait.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= IDC <= 99; integer
Look Up Codes	n/a

2.003

Field Name	Originating Agency Case Number (OCA)
Description	This field contains the one-to-twenty character Originating Agency Case Identifier (OCA) assigned by the originating agency. This alphanumeric-special (ANS) field may contain any printable 7-bit ASCII character with the exception of the period (.). The OCA must not begin with a blank.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 20
Char Types	ANS
Special Chars	Any - except for period
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.004

Field Name	Originating Agency Identifier Audit Sequence (ORI_AUD_SEQ)
Description	A sequence of Originating Agency Identifier(s) audited. Each time when the transaction is forwarded to another destination, the sending agency shall add its ORI to the end of the ORI Audit Sequence. This results in a list of ORIs with the most recent one transmitted being on the bottom (at the end) of the list.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	9 to 9
Char Types	ANS
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.005

Field Name	Transaction Description Text (TXN_NOT)
Description	This free-text field is used to provide additional information regarding electronic transaction.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1,000
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.100

Field Name	Latent Priority (LAT_PRI)
Description	This field shall indicate the priority of a latent search (from 1 to 5, with 1 being the highest priority and 5 being the default).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.101

Field Name	**Latent Case Number (LCN)**
Description	This field identifies the Latent Case. It is comprised of the NATO country code and the Latent Case Identifier.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.101_1

Field Name	*Country Code*
Description	The NATO STANAG 1059 alpha3 country code.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

2.101_2

Field Name	*Latent Case Identifier (LCID)*
Description	This is the identifier for the Latent Case assigned by the NATO country.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	ANS
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.200

Field Name	**Biometric Subject Name (SUBJ_NAME)**
Description	The name of the biometric subject. This is a set comprised of 7 information items: Name-One, Name-Two, Name-Three, Name-Four, Name-Five, Name Validity and Transliteration Code.
Remarks	n/a
Format	n/a
Num Info Items	7
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.200_1

Field Name	*Name - One (NAM1)*
Description	The last name, surname or the family name of the person. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nasab name, a patronymic or series of patronymics.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.200_2

Field Name	*Name - Two (NAM2)*
Description	The personal name of a person. It is typically the first name in western culture. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Ism name, the main name of an Arab person; his or her personal name (e.g. "Kareem" or "Fatimah").
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.200_3

Field Name	*Name - Three (NAM3)*
Description	The middle name of a person. It is placed between the first given name and the surname. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Kunya name, the person's first-born son is used as a substitute for the ism.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.200_4

Field Name	*Name - Four (NAM4)*
Description	A name of a person to represent a the fourth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fourth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nisbah name, describes a person's occupation, geographic home area, or descent (tribe, family, etc.).
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.200_5

Field Name	*Name - Five (NAM5)*
Description	A name of a person to represent a the fifth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fifth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Laqab name, intended as a description of the person. Also can be used for the honoric title.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.200_6

Field Name	*Name Validity (NAME_VLD)*
Description	This field defines the validity of the individual's name.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	NAME VALIDITY CODES: DOC = Documented SRT = Self Reported ORT = Other Reported

Type-2 User-Defined Descriptive Text Record

2.200_7

Field Name	*Transliteration Code (TRANSLIT_CD)*
Description	An encoding to transcribe from one alphabet to another.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 6
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	TRANSLITERATION CODES: Arabic = Arabic Hindi = Hindi Urdu = Urdu NONE = No Transliteration Applied

2.201

Field Name	**Biometric Subject Current Residence (SUBJ_ADDR)**
Description	The address of the current residence of the biometric subject. This is a set comprised of 9 information items: Address Line 1, Address Line 2, City, State/Province, Country Code, Postal Code, Neighborhood/District, Village and Address Validity.
Remarks	n/a
Format	n/a
Num Info Items	9
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.201_1

Field Name	*Address Line 1 (ADD1)*
Description	The street, including both number and name.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.201_2

Field Name	*Address Line 2 (ADD2)*
Description	Additional information about the street (e.g. apt #).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.201_3

Field Name	*City (CITY)*
Description	Name of the city.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.201_4

Field Name	*State / Province (STATE)*
Description	The state, province or subdivision of a location.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.201_5

Field Name	*Country Code*
Description	The NATO STANAG 1059 alpha3 country code.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	NATO STANAG 1059 Country Codes
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

Type-2 User-Defined Descriptive Text Record

2.201_6

Field Name	*Postal Code (POSTAL)*
Description	Alphanumeric code assigned to groups of addresses by various national postal systems throughout the world.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.201_7

Field Name	*Neighborhood / District (NEIG)*
Description	A geographically localized community within a larger city, town or suburb.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.201_8

Field Name	*Village (VLG)*
Description	Small population unit, typically rural, held together by common economic and political ties.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.201_9

Field Name	*Address Validity (ADDR_VLD)*
Description	This field defines the validity of the address information.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	ADDRESS VALIDITY CODES: DOC = Documented SRT = Self Reported ORT = Other Reported

Type-2 User-Defined Descriptive Text Record

2.202

Field Name	Biometric Subject Alternate Name (SUBJ_AKA)
Description	An alternate name used by the biometric subject.
Remarks	Can also be used to capture the subject's full maiden name.
Format	n/a
Num Info Items	9
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.202_1

Field Name	*Person Alternate Name Category Code (NAMCATCD)*
Description	Defines the type of name such as maiden name, nickname, alias.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 4
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	ALTERNATE NAME CATEGORY CODES: AKA = Alias MAID = Maiden NICK = Nickname

2.202_2

Field Name	*Name - One (NAM1)*
Description	The last name, surname or the family name of the person. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nasab name, a patronymic or series of patronymics.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.202_3

Field Name	*Name - Two (NAM2)*
Description	The personal name of a person. It is typically the first name in western culture. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Ism name, the main name of an Arab person; his or her personal name (e.g. "Kareem" or "Fatimah").
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.202_4

Field Name	*Name - Three (NAM3)*
Description	The middle name of a person. It is placed between the first given name and the surname. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Kunya name, the person's first-born son is used as a substitute for the ism.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.202_5

Field Name	*Name - Four (NAM4)*
Description	A name of a person to represent a the fourth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fourth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nisbah name, describes a person's occupation, geographic home area, or descent (tribe, family, etc.).
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.202_6

Field Name	*Name - Five (NAM5)*
Description	A name of a person to represent a the fifth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fifth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Laqab name, intended as a description of the person. Also can be used for the honorific title.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.202_7

Field Name	*Name Validity (NAME_VLD)*
Description	This field defines the validity of the individual's name.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	NAME VALIDITY CODES: DOC = Documented SRT = Self Reported ORT = Other Reported

2.202_8

Field Name	*Transliteration Code (TRANSLIT_CD)*
Description	An encoding to transcribe from one alphabet to another.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 6
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	TRANSLITERATION CODES: Arabic = Arabic Hindi = Hindi Urdu = Urdu NONE = No Transliteration Applied

Type-2 User-Defined Descriptive Text Record

2.202_9

Field Name	*Comment (COM)*
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.203

Field Name	**Languages Spoken (LAN_SPKN)**
Description	This field consists of two information items: Country Code and Language Name of languages spoken by the biometric subject.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.203_1

Field Name	*Country Code*
Description	The NATO STANAG 1059 alpha3 country code.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	None
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

Type-2 User-Defined Descriptive Text Record

2.203_2

Field Name	*Language Name (LAN_NM)*
Description	Free text to specifies the languages spoken by the subject.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.204

Field Name	**Biometric Subject Citizenship**
Description	The country of which the biometric subject is a citizen. NATO STANAG 1059 alpha3 country codes are used.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	NATO STANAG 1059 Country Codes
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

2.205

Field Name	**Biometric Subject Birth Date (SUBJ_BIRTHDATE)**
Description	The biometric subject's complete date of birth.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.205_1

Field Name	*Birth Date (DOB)*
Description	The 8 digit calendar date for the person's birth date.
Remarks	Pad any portion of the date with zero's when unknown or not used. For example, 00000000 when the field is mandatory, but the date is unknown. 20100000 when the year is known but month and day are unknown or not used.
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	8 digit date
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.205_2

Field Name	*Date Validity (DATEVLD)*
Description	This field defines the validity of the date.
Remarks	When any part of the date value is padded with zero's, the date validity shall be set to 'EST' for estimated.
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	DATE VALIDITY CODES: DOC = Documented EST = Estimated SRT = Self Reported

2.205_3

Field Name	*Calendar Type (CALTYP)*
Description	The type of calendar the date is being specified in (e.g. Gregorian and Islamic).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	CALENDAR TYPE CODES: G = Gregorian I = Islamic C = Chinese H = Hebrew

2.206

Field Name	**Biometric Subject Birth Location (SUBJ_POB)**
Description	Information identifying where the biometric subject was born.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.206_1

Field Name	*City (CITY)*
Description	Name of the city.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.206_2

Field Name	*State / Province (STATE)*
Description	The state, province or subdivision of a location.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.206_3

Field Name	*Country Code*
Description	The NATO STANAG 1059 alpha3 country code.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	NATO STANAG 1059 Country Codes
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

2.206_4

Field Name	*Village (VLG)*
Description	Small population unit, typically rural, held together by common economic and political ties.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.206_5

Field Name	*Comment (COM)*
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.207

Field Name	**Biometric Subject Death Location (SUBJ_POD)**
Description	Defines the biometric subject's place of death.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.207_1

Field Name	*City (CITY)*
Description	Name of the city.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.207_2

Field Name	*State / Province (STATE)*
Description	The state, province or subdivision of a location.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.207_3

Field Name	*Country Code*
Description	The NATO STANAG 1059 alpha3 country code.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	NATO STANAG 1059 Country Codes
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

2.207_4

Field Name	*Village (VLG)*
Description	Small population unit, typically rural, held together by common economic and political ties.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.207_5

Field Name	*Comment (COM)*
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.208

Field Name	Biometric Subject Marital Status (SUBJ_MARITAL)
Description	Marital status of the biometric subject.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	MARITAL STATUS CODES: SGL = Single, sum of never-married, widowed, and divorced people. NMA = Never Married WID = Widowed DIV = Divorced MAR = Married, sum of "married, spouse present," "separated," and "other married, spouse absent." MSP = Married, Spouse Present SEP = Separated MOT = Other Married, Spouse Absent

2.209

Field Name	Biometric Subject Contact Telephone (SUBJ_PHONE)
Description	The telephone number including extension (if available) that you might contact the biometric subject. Different categories of telephone number (e.g. cell, home, work, etc.) are supported.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.209_1

Field Name	*Telephone Category Code (PH_TYP)*
Description	The kind of telephone number (e.g. Home Phone, Work Phone, etc.)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 2
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	TELEPHONE CATEGORY CODES: HP = Home Phone WP = Work Phone CP = Cell Phone RP = Relative Phone OT = Other FX = Fax PG = Pager PH = Phone

Type-2 User-Defined Descriptive Text Record

2.209_2

Field Name	*Phone Number (PHNUM)*
Description	The full telephone number including international country code and area code. Space and hypen are allowed.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	ANS
Special Chars	Blank,Hyphen
Value Constraints	n/a
Look Up Codes	n/a

2.209_3

Field Name	*Phone Extension (PHEXT)*
Description	The number for an additional telephone wired to the same telephone line as another.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 20
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

2.210

Field Name	**Biometric Subject Contact Email (SUBJ_EMAIL)**
Description	The email address of the biometric subject.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 254
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.211

Field Name	**Biometric Subject Group Membership (GRPMBR)**
Description	Provide summary information on organization(s) the biometric subject is a member of.
Remarks	n/a
Format	n/a
Num Info Items	15
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.211_01

Field Name	*Group Name (GMNAM)*
Description	The name of the group that the biometric subject is associated with.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 100
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.211_02

Field Name	*Group Type (GMTYP)*
Description	The type of group that the biometric subject is associated with.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 4
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	GROUP TYPE CODES: TRIB = Tribe GANG = Gang REL = Religious SIG = Special Interest Group POL = Political Group TER = Terrorist Group XXX = Undetermined SOC = Social Networking Group

2.211_03

Field Name	*Group Member Role (GMRL)*
Description	The role within the associated group that the biometric subject is acting as.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 100
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.211_04

Field Name	*Address Line 1 (ADD1)*
Description	The street, including both number and name.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.211_05

Field Name	*Address Line 2 (ADD2)*
Description	Additional information about the street (e.g. apt #).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.211_06

Field Name	*City (CITY)*
Description	Name of the city.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.211_07

Field Name	*State / Province (STATE)*
Description	The state, province or subdivision of a location.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	free text
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.211_08

Field Name	*Country Code*
Description	The NATO STANAG 1059 alpha3 country code.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	NATO STANAG 1059 Country Codes
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

2.211_09

Field Name	*Postal Code (POSTAL)*
Description	Alphanumeric code assigned to groups of addresses by various national postal systems throughout the world.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.211_10

Field Name	*Village (VLG)*
Description	Small population unit, typically rural, held together by common economic and political ties.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.211_11

Field Name	*Phone Number 1 (PHNUM1)*
Description	The full telephone number including international country code and area code. Space and hypen are allowed.
Remarks	This is the primary contact telephone number.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	ANS
Special Chars	Blank,Hyphen
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.211_12

Field Name	*Phone Number 2 (PHNUM2)*
Description	The full telephone number including international country code and area code. Space and hypen are allowed.
Remarks	This is the secondary contact telephone number.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	ANS
Special Chars	Blank,Hyphen
Value Constraints	n/a
Look Up Codes	n/a

2.211_13

Field Name	*Email Address 1 (EMAIL1)*
Description	Identifies the primary email box to which email messages are delivered.
Remarks	This is the primary email address number.
Format	n/a
Num Info Items	0
Num Chars	1 to 254
Char Types	ANS
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.211_14

Field Name	*Email Address 2 (EMAIL2)*
Description	Identifies an alternate email box to which email messages are delivered.
Remarks	This is the secondary email address number.
Format	n/a
Num Info Items	0
Num Chars	1 to 254
Char Types	ANS
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.211_15

Field Name	*Comment (COM)*
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.212

Field Name	**Biometric Subject Associated Individual (IASSOC)**
Description	This set of fields identifies the names, gender, roles, address information and contact information of an individual who is associated with the biometric subject.
Remarks	n/a
Format	n/a
Num Info Items	21
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.212_01

Field Name	*Gender (GENDER)*
Description	A one character code to indicate if the person is male (M), female (F) or unknown (U).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	GENDER CODES: M = Male F = Female U = Unknown

Type-2 User-Defined Descriptive Text Record

2.212_02

Field Name	*Associated Individual Role (IASSOC_ROLE)*
Description	The role of an individual who is affiliated with the biometric subject.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	ASSOCIATED INDIVIDUAL ROLE CODES: 0 = Undetermined 1 = Parent 2 = Maternal Grandparent 3 = Paternal Grandparent 4 = Spouse 5 = Child 6 = Sibling 7 = Associate

2.212_03

Field Name	*Name - One (NAM1)*
Description	The last name, surname or the family name of the person. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nasab name, a patronymic or series of patronymics.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.212_04

Field Name	*Name - Two (NAM2)*
Description	The personal name of a person. It is typically the first name in western culture. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Ism name, the main name of an Arab person; his or her personal name (e.g. "Kareem" or "Fatimah").
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.212_05

Field Name	*Name - Three (NAM3)*
Description	The middle name of a person. It is placed between the first given name and the surname. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Kunya name, the person's first-born son is used as a substitute for the ism.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.212_06

Field Name	*Name - Four (NAM4)*
Description	A name of a person to represent a the fourth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fourth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nisbah name, describes a person's occupation, geographic home area, or descent (tribe, family, etc.).
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.212_07

Field Name	*Name - Five (NAM5)*
Description	A name of a person to represent a the fifth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fifth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Laqab name, intended as a description of the person.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.212_08

Field Name	*Address Line 1 (ADD1)*
Description	The street, including both number and name.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.212_09

Field Name	*Address Line 2 (ADD2)*
Description	Additional information about the street (e.g. apt #).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.212_10

Field Name	*City (CITY)*
Description	Name of the city.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.212_11

Field Name	*State / Province (STATE)*
Description	The state, province or subdivision of a location.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.212_12

Field Name	*Country Code*
Description	The NATO STANAG 1059 alpha3 country code.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	NATO STANAG 1059 Country Codes
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

2.212_13

Field Name	*Postal Code (POSTAL)*
Description	Alphanumeric code assigned to groups of addresses by various national postal systems throughout the world.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.212_14

Field Name	*Village (VLG)*
Description	Small population unit, typically rural, held together by common economic and political ties.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.212_15

Field Name	*Phone Number 1 (PHNUM1)*
Description	The full telephone number including international country code and area code. Space and hypen are allowed.
Remarks	This is the primary contact telephone number.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	ANS
Special Chars	Blank,Hyphen
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.212_16

Field Name	*Phone Number 2 (PHNUM2)*
Description	The full telephone number including international country code and area code. Space and hypen are allowed.
Remarks	This is the secondary contact telephone number.
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	ANS
Special Chars	Blank,Hyphen
Value Constraints	n/a
Look Up Codes	n/a

2.212_17

Field Name	*Email Address 1 (EMAIL1)*
Description	Identifies the primary email box to which email messages are delivered.
Remarks	This is the primary email address number.
Format	n/a
Num Info Items	0
Num Chars	1 to 254
Char Types	ANS
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.212_18

Field Name	*Email Address 2 (EMAIL2)*
Description	Identifies an alternate email box to which email messages are delivered.
Remarks	This is the secondary email address number.
Format	n/a
Num Info Items	0
Num Chars	1 to 254
Char Types	ANS
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.212_19

Field Name	*Birth Date (DOB)*
Description	The 8 digit calendar date for the person's birth date.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	8 digit date
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.212_20

Field Name	*Occupation (OCP)*
Description	This free-text field contains the person‘s occupation. The OCP returned in a response is the same as the one submitted.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.212_21

Field Name	*Comment (COM)*
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.213

Field Name	**Biometric Subject Death Date (SUBJ_DEATHDATE)**
Description	The biometric subject's complete date of death.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.213_1

Field Name	*Death Date (DOD)*
Description	The 8 digit calendar date for the person's death date.
Remarks	Pad any portion of the date with zero's when unknown or not used. For example, 00000000 when the field is mandatory, but the date is unknown. 20100000 when the year is known but month and day are unknown or not used.
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	8 digit date
Look Up Codes	n/a

2.213_2

Field Name	*Date Validity (DATEVLD)*
Description	This field defines the validity of the date.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	DATE VALIDITY CODES: DOC = Documented EST = Estimated SRT = Self Reported

2.213_3

Field Name	*Calendar Type (CALTYP)*
Description	The type of calendar the date is being specified in (e.g. Gregorian and Islamic).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	CALENDAR TYPE CODES: G = Gregorian I = Islamic C = Chinese H = Hebrew

Type-2 User-Defined Descriptive Text Record

2.230

Field Name	Collected Identification
Description	Information about an identification issued by an agency. It is a set of fields consists of Identification Issuance Authority Type, Name of Identification, Identification Identifier, Issuance Organization, Issuance Office, Issuance Date, Expiration Date, Comment.
Remarks	n/a
Format	n/a
Num Info Items	8
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.230_1

Field Name	*Identification Issuance Authority Type (CIAUTHTYPE)*
Description	A kind of authority that issued the identification. (E.G. Government Issued Identification, Military Issued Identification, etc.)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	IDENTIFICATION ISSUANCE AUTHORITY CATEGORY CODES: GOV = Government Issued Identification MIL = Military Issued Identification OTH = Other Organization Issued Identification

2.230_2

Field Name	*Identification Type (ID_TYP)*
Description	The type of the person's identification (e.g. National Identification Number, Passport, Driver's License, etc.) Use codes listed below for the common collected identification type. For other types of identification, enter the name of the identification document.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	COMMON COLLECTED IDENTIFICATION TYPE CODES: PASS = Passport Information SSN = Social Security Number VISA = Visa Number NID = National Identification Number DLN = Driver's License Number

Type-2 User-Defined Descriptive Text Record

2.230_3

Field Name	*Collected Identification Identifier (CIID)*
Description	The identifying value for the issued identification. Examples include passport number, ssn, or drivers license number. This field is free form text.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 100
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.230_4

Field Name	*Collected Identification Issuance Organization (CIISSORG)*
Description	The organization or system that issued the identification collected. This field is free form text and contains values such as “US Government”, a country name, a state name, an agency name.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 100
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.230_5

Field Name	*Collected Identification Issuance Date (CIISSDT)*
Description	The date when the collected identification was issued.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

2.230_6

Field Name	*Collected Identification Expiration Date (CIEXPDT)*
Description	The date the issued identification expires.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.230_7

Field Name	*Collected Identification Issuance Office (CIISSOFF)*
Description	A location or branch identifier for the office or system which issued the identification. This field is free form text. (E.G. The location where the biometric subject receives their card after verification.)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 100
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.230_8

Field Name	*Collected Identification Comment (CICOM)*
Description	The notes and comments concerning the issued identification collected.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 250
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.231

Field Name	**Repository Reference Number (RRN)**
Description	This field captures the unique reference number for the subject assigned by the NATO's country repository. It consists of 3 information items: Country Code, Designated Repository Code and the Repository Assigned Reference Identifier.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.231_1

Field Name	*Country Code*
Description	The NATO STANAG 1059 alpha3 country code.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

2.231_2

Field Name	*Designated Repository Code (DRC)*
Description	The numeric code for the designation of the repository.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

2.231_3

Field Name	*Repository Assigned Reference Identifier (RRI)*
Description	This is the unique identifier assigned by a repository for the enrolled subject.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	ANS
Special Chars	Forward Slash
Value Constraints	n/a
Look Up Codes	n/a

2.232

Field Name	**Detainee Reference Number (DRN)**
Description	A reference number assigned to a NATO detainee.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	ANS
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.233

Field Name	Detainment Reason (DET_RSN)
Description	This is free-form text containing the reason for detaining a person of interest within the BEWL.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 300
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.250

Field Name	Biometric Subject Gender (SUBJ_GENDER)
Description	A one character code to indicate the biometric subject is mail (M), female (F) or unknown (U).
Remarks	
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	GENDER CODES: M = Male F = Female U = Unknown

2.251

Field Name	Ethnicity/Race (SUBJ_RAC)
Description	The observed or reported ethnic/racial physical characteristic of the biometric subject.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	ETHNIC_RACIAL CHARACTERISTIC CODES: A = Chinese, Japanese, Filipino, Korean, Polynesian, Indian, Indonesian, Asian Indian, Samoan, or any other Pacific Islander B = A person having origins in any of the black racial groups of Africa I = American Indian, Eskimo, Alaskan native, or person with origin in any of the 48 US contiguous states or Alaska who maintains cultural identification through tribal affiliation or community recognition U = Of indeterminable race W = Caucasian, Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race HL = Hispanic / Latino AR = Arab AI = Asian Indian PI = Polynesian (Pacific Islander) AS = Asian NA = Native American

Type-2 User-Defined Descriptive Text Record

2.252

Field Name	Biometric Subject Eye Color (SUBJ_EYE)
Description	The color of the biometric subject's eye(s).
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.252_1

Field Name	*Eye Position (EPOS)*
Description	The position of the eye.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	EPOS = 0, 1, or 2
Look Up Codes	EYE POSITION CODES: 0 = Undefined 1 = Right Eye 2 = Left Eye

2.252_2

Field Name	*Eye Color (ECOL)*
Description	This field shall specify the subject's eye color.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	ALPHA EYE COLOR CODES: BLK = Black BLU = Blue BRO = Brown GRN = Green GRY = Gray HAZ = Hazel MAR = Maroon MUL = Multicolored PNK = Pink XXX = Unknown

Type-2 User-Defined Descriptive Text Record

2.253

Field Name	Iris Image Omitted Reason (IOMITTED)
Description	Reason why the iris image (aka as Type-17 record) is not present in the associated file.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	IRIS IMAGE OMMITTED REASON CODES: L = Not possible to capture left iris Z = Left eye missing R = Not possible to capture right iris X = Right eye missing B = Not possible to capture either iris A = Both eyes missing

2.254

Field Name	Hair Color (HAI)
Description	In this field, the three-letter code from the [look up codes below] is used to indicate the subject's color of hair.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	HAIR COLOR CODES: XXX = Unknown BAL = Bald BLK = Black BLN = Blond or Strawberry BRO = Brown GRY = Gray or Partially Gray RED = Red or Auburn SDY = Sandy WHI = White BLU = Blue GRN = Green ONG = Orange PNK = Pink PLE = Purple

Type-2 User-Defined Descriptive Text Record

2.255

Field Name	**Biometric Subject Height Measurement (SUBJ_HEIGHT)**
Description	The set of data describing the height measurement (including measurement range) of a biometric subject.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.255_1

Field Name	*Height Value (HGT)*
Description	The value of the height measurement. Mininum height shall be 4'0" and maximum height shall be 7'11". The metric equivalent is also allowed (min = 1.22M, max = 2.41M). The following rules apply when measuring an individual's height: Height (FTIN) - Three-character value, the first (leftmost) digit is used to show feet while the two rightmost digits are used to show inches between 00 and 11. Height (IN) - Two-character value. Height (M) - Four-character value, the first (leftmost) digit is used to show meter, a period is allowed and the two rightmost digits are used to show fraction of a meter. Height (CM) - Three-character value. Note: If the measurement is unknown but mandatory, use "000" to represent unknown measurement.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 4
Char Types	NS
Special Chars	Period
Value Constraints	n/a
Look Up Codes	n/a

2.255_2

Field Name	*Length Unit (LENUNIT)*
Description	The units of measure associated with a given height measurement (e.g., inches, centimeters, etc)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	HEIGHT MEASUREMENT UNIT CODES: FTIN = Feet Inches IN = Inch M = Meter CM = Centimeter

Type-2 User-Defined Descriptive Text Record

2.255_3

Field Name	*Measurement Validity (MEASVLD)*
Description	Captures the validity of the measurement.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	MEASUREMENT VALIDITY CODES: EST = Estimated MEA = Measured

2.256

Field Name	**Biometric Subject Weight Measurement (SUBJ_WEIGHT)**
Description	The set of data describing the weight measurement (including measurement range) of a biometric subject.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.256_1

Field Name	*Weight Value (WGT)*
Description	The value of the weight measurement. The minimum weight shall be 0 LB/KG. The maximum weight shall be 499 LB or 227 KG. Measurement shall be rounded up to the nearest pound or kilogram. Note: If the measurement is unknown but mandatory, use "000" to represent unknown measurement.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.256_2

Field Name	*Mass Unit (MASSUNIT)*
Description	The units of measure associated with a given weight measurement (e.g., pounds).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 2
Char Types	A
Special Chars	n/a
Value Constraints	see Look Up Codes
Look Up Codes	WEIGHT MEASUREMENT UNIT CODES: LB = Pound KG = Kilogram

2.256_3

Field Name	*Measurement Validity (MEASVLD)*
Description	Captures the validity of the measurement.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	MEASUREMENT VALIDITY CODES: EST = Estimated MEA = Measured

2.257

Field Name	**Scars, Marks and Tattoos**
Description	This field consists of two information item to describe a Scar, Mark or Tattoo: SMT Location Code and SMT Description.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.257_1

Field Name	*SMT Location Code (SMT_CD)*
Description	For each scar, mark, or tattoo present on the biometric subject, the appropriate NCIC code shall be used in this information item that represents the location of the SMT. Blanks are allowed as special characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 10
Char Types	AS
Special Chars	Blank
Value Constraints	n/a
Look Up Codes	NCIC DESIGNATION CODES: NCIC Manual = see NCIC Code Manual version 10.3

2.257_2

Field Name	*SMT Description (SMT_DESC)*
Description	Free text describing marks, scars and tattoos of the biometric subject. If images of the marks, scars and/or tattoos exists they should be included as Type 10 records within the transaction.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.258

Field Name	**Amputated or Bandaged [Type-2] (AMP)**
Description	This repeating field contains information about amputated or bandaged fingerprints in a submission. The field is composed of repeating sets of two subfields: Finger Position (FGP) Amputated Or Bandaged Code (AMPCD). This field is to be used any time there are fewer than ten printable fingers in a tenprint submission for finger positions 1 – 10 or positions 11–15 to specify when no slap fingerprint images are provided in the finger positions (ex. Entire right hand is not printed). A partially amputated finger should be printed and be marked amputated, XX. If the finger's image is missing for any reason, (for example, when the arresting agency did not specify a reason in its submission to the State Identification Bureau) the UP code should be used. This field is used to tell repository which finger positions need to characterized. The UP code should only be used when the entire image is not provided for fingerprints in the submission. This code will indicate that the repository should ignore this image and not include the image in the matching process. For the native encoding, the two-character finger position code is followed by the US separator and the amputated or bandaged code. Each set of fingers/amp codes shall be separated by the RS separator.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.258_1

Field Name	*Finger Position Code (FGP)*
Description	The two-character finger position code.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 2
Char Types	N
Special Chars	None
Value Constraints	01 <= FGP <= 15
Look Up Codes	FINGERPRINT TEN FINGER NUMBER CODES: 01 = Right thumb 02 = Right index finger 03 = Right middle finger 04 = Right ring finger 05 = Right little finger 06 = Left thumb 07 = Left index finger 08 = Left middle finger 09 = Left ring finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs

2.258_2

Field Name	*Amputated or Bandaged Code (AMPCD)*
Description	This information item provides the code that describes the reason the finger's image is missing.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 2
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	FINGERPRINT MISSING REASON CODES: UP = Unable to print (e.g., bandaged) XX = Partial print due to amputation

2.259

Field Name	**Facial Image Omitted Reason (FOMITTED)**
Description	Reason why the facial image (aka as full frontal pose Type-10 record) is not present in the associated file.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 2
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	FACIAL IMAGE OMITTED REASON CODES: UP = Unable to capture (e.g. bandaged) XX = Paritally captured due to amputation of some facial feature(s)

Type-2 User-Defined Descriptive Text Record

2.260

Field Name	Biometric Subject Comment (SUBJ_COM)
Description	The comments or remarks on the biometric subject for which the biometric sample was collected.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 250
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.261

Field Name	Biometric Subject Derogatory Comment (DEROG_COM)
Description	The derogatory notes and comments concerning a biometric subject.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 250
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.263

Field Name	Alert (ALERT)
Description	This field contains alert information that will be used in the case where a new submission into the system results in an IDENTED response against the submission containing the alert data. This field contains five information items and all five must be completed if this field is used. It consists of Alert Function, Alert Category, Alert Value, Alert Contact and Alert Detail.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.263_1

Field Name	*Alert Function (ALERT_FUN)*
Description	An Indication of whether the alert on a biometric subject is currently set ON or OFF.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	ALERT FUNCTION CODES: 0 = Off 1 = On

Type-2 User-Defined Descriptive Text Record

2.263_2

Field Name	*Alert Category*
Description	The alert category is free-form text that provides the description of the nature of the individual.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.263_3

Field Name	*Alert Value (ALERT_VAL)*
Description	The level of interest in a given biometric subject who has been flagged for alert.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	ALERT VALUE CODES: 1 = None 2 = Low Value 3 = Medium Value 4 = High Value

2.263_4

Field Name	*Alert Contact (ALERT_CONTACT)*
Description	The agency and individual contact reference responsible for establishing the alert.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 80
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.263_5

Field Name	*Alert Detail (ALERT_DETAIL)*
Description	Special handling instructions or other information about the individual identified in an alert.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 255
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.300

Field Name	Collection Reason (COL_RSN)
Description	The purpose for which a biometric sample was obtained from the biometric subject.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 300
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.301

Field Name	Encounter Comment (ENCTR_COM)
Description	The comments or notes on the encounter mission in which the biometric sample was collected including any extenuating circumstances of the encounter.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1,000
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.302

Field Name	Encounter Mission Type (ENCTR_MSN)
Description	The kind of mission under which the biometric subject's data was collected.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 5
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	ENCOUNTER MISSION CODES: AC = Access CP = Combat Patrol PC = Population Control SE = Site Exploitation EMIO = Expanded Maritime Interception Operation OTHER = Other DT = Detainee Transfer EN = Enrollment HA = Humanitarian Aid VBSS = Vessel Board Search and Seizure for Navy

Type-2 User-Defined Descriptive Text Record

2.304

Field Name	**Arrest Segment Literal (ASL)**
Description	This field is made up of the following subfields: Date of Offense (DOO) Arrest Offense Literal (AOL).
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.304_1

Field Name	*Date of Offense (DOO)*
Description	The DOO shall appear as an eight-digit number. The DOO shall not exceed the current date except when the submission originates from an international contributor located in a time zone earlier than the Eastern Time Zone. This date field shall contain the local date for the region submitting the request. CJIS has edit checks in place to allow for the acceptance of the local date as valid up to 24 hours in advance to accommodate the variance between international time zones.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

2.304_2

Field Name	*Arrest Offense Literal (AOL)*
Description	a free text description of an offense charged on an arrest. The first character of the AOL text must not be blank. Each AOL should have a corresponding DOO.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 300
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.305

Field Name	Operational Personnel (OPER)
Description	This set of fields shall identify the name information, contact information, unit/organization, role, rank/ grade, identification type and the identification identifier of the personnel assigned to specific day-to-day responsibility for program activities.
Remarks	n/a
Format	n/a
Num Info Items	15
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.305_01

Field Name	*Operational Personnel Unit/Organization (OPORG)*
Description	The name or identifier for the operational unit or organization the Operational Personnel belongs to.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.305_02

Field Name	*Operational Personnel Role (OPRL)*
Description	The role of the Operational Personnel.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 2
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	OPERATION PERSONNEL ROLE CODES: AO = ABIS Operator RA = Requesting Authority AA = Approval Authority EN = Enroller LS = Latent Submitter LT = Latent Technician SR = Screener SP = Sponsor BC = Biometric Sample Collector

Type-2 User-Defined Descriptive Text Record

2.305_03

Field Name	*NATO Military Rank Grade Code (RANK)*
Description	The NATO military rank or grade of the person.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 5
Char Types	ANS
Special Chars	Hyphen
Value Constraints	n/a
Look Up Codes	NATO STANAG 2116 FOR GRADES OF MILITARY PERSONNEL: NATO Codes for Grades of Military Personnel = See NATO STANAG 2116

2.305_04

Field Name	*Identification Issuance Authority Type (OPIDCATCD)*
Description	A kind of authority that issued the identification. (E.G. Government Issued Identification, Military Issued Identification, etc.)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	IDENTIFICATION ISSUANCE AUTHORITY CATEGORY CODES: GOV = Government Issued Identification MIL = Military Issued Identification OTH = Other Organization Issued Identification

2.305_05

Field Name	*Identification Type (ID_TYP)*
Description	The type of the person's identification (e.g. National Identification Number, Passport, Driver's License, etc.) Use codes listed below for the common collected identification type. For other types of identification, enter the name of the identification document.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	COMMON COLLECTED IDENTIFICATION TYPE CODES: PASS = Passport Information SSN = Social Security Number VISA = Visa Number NID = National Identification Number DLN = Driver's License Number

Type-2 User-Defined Descriptive Text Record

2.305_06

Field Name	*Operational Personnel Identifier (OPID)*
Description	The value of the unique identifier of the Operational Personnel, such as Social Security Number.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.305_07

Field Name	*Name - One (NAM1)*
Description	The last name, surname or the family name of the person. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.305_08

Field Name	*Name - Two (NAM2)*
Description	The personal name of a person. It is typically the first name in western culture. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.305_09

Field Name	*Name - Three (NAM3)*
Description	The middle name of a person. It is placed between the first given name and the surname. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.305_10

Field Name	*Name - Four (NAM4)*
Description	A name of a person to represent a the fourth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fourth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.305_11

Field Name	*Name - Five (NAM5)*
Description	A name of a person to represent a the fifth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fifth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.305_12

Field Name	*Phone Number 1 (PHNUM1)*
Description	The full telephone number including international country code and area code. Space and hypen are allowed.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	ANS
Special Chars	Blank,Hyphen
Value Constraints	n/a
Look Up Codes	n/a

2.305_13

Field Name	*Phone Number 2 (PHNUM2)*
Description	The full telephone number including international country code and area code. Space and hypen are allowed.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	ANS
Special Chars	Blank,Hyphen
Value Constraints	n/a
Look Up Codes	n/a

2.305_14

Field Name	*Email Address 1 (EMAIL1)*
Description	Identifies the primary email box to which email messages are delivered.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 254
Char Types	ANS
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.305_15

Field Name	*Email Address 2 (EMAIL2)*
Description	Identifies an alternate email box to which email messages are delivered.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 254
Char Types	ANS
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.306

Field Name	Transportation (TRANSPORT)
Description	A set of fields for capturing the method of transportation on which the biometric subject was encountered, the type of identification and identifier assigned to the conveyance.
Remarks	n/a
Format	n/a
Num Info Items	8
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.306_1

Field Name	*Transport Type (TRANSPORT_TYP)*
Description	The category of transportation on which the biometric subject was encountered.
Remarks	Additional valid values for TRUCK, BUS, BIKE, MTRB, ANML, and TRAIN have been added.
Format	n/a
Num Info Items	0
Num Chars	3 to 6
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	ENCOUNTER CONVEYANCE CODES: AUTO = Automobile AIR = Aircraft VESSEL = Vessel OTH = Other TRUCK = Pickup Truck, Dump Truck, Garbage Truck, Semi, Mack Truck, 18 Wheeler, etc. BUS = Public Bus, School Bus, Mini Bus, Tour Bus, etc. BIKE = Bicycles MTRB = Motocycle ANML = Animals: donkeys, horses, camels, etc. TRAIN = Train

2.306_2

Field Name	*Transport Identifier Category Code (TRANSPORT_IDCATCD)*
Description	The type of identification assigned to a conveyance.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 20
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	ENCOUNTER CONVEYANCE IDENTIFIER CODES: SCONUM = Ship Control Number NIDDOC = National Identification Document VESSELNUM = Vessel Registration Number VIN = Vehicle Identification Number LICENSE = License Plate Number AIRNUM = Aircraft Registration Number BATGEN = BAT Generated Vehicle ID

Type-2 User-Defined Descriptive Text Record

2.306_3

Field Name	*Transport Identifier (TRANSPORT_ID)*
Description	The identifier assigned to a conveyance.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 20
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.306_4

Field Name	*Transport Make (TRANSPORT_MAK)*
Description	The manufacturer of the transportation device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.306_5

Field Name	*Transport Model (TRANSPORT_MOD)*
Description	The model number of the transportation device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.306_6

Field Name	*Transport Model Year (TRANSPORT_MODYR)*
Description	The model year of the transportation device.
Remarks	n/a
Format	YYYY
Num Info Items	0
Num Chars	4 to 4
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.306_7

Field Name	*Transport Color (TRANSPORT_COL)*
Description	The primary color of the transportation device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

2.306_8

Field Name	*Comment (COM)*
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.307

Field Name	**Date of Arrest (DOA)**
Description	This field contains the date of arrest. The date shall appear as an eight-digit number. DOA shall not exceed date of submission except when the submission originates from an international contributor located in a time zone earlier than the Eastern Time Zone. This date field shall contain the local date for the region submitting the request.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.308

Field Name	Geographic Sample Acquisition Location (GEO)
Description	This field contains the location where the sample/original source/context information was acquired – not where it is stored.
Remarks	n/a
Format	n/a
Num Info Items	15
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.308_01

Field Name	*Universal Time Entry (UTE)*
Description	The coordinated universal time (UTC) where the biometric sample was collected. This time is independent of the actual time zone where the time and date is recorded. The date is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	If sample collection time is unknown, set it to "00000000000000Z."
Format	n/a
Num Info Items	0
Num Chars	15 to 15
Char Types	U
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

2.308_02

Field Name	*Latitude Degree Value (LTD)*
Description	The second information item is latitude degree value / LTD. This is a value that specifies the degree of latitude. The value shall be between -90 (inclusive) and +90 (inclusive). The degrees may be expressed as an integer (without a decimal) or a real number including decimals. If decimals are present, then minutes and seconds shall be empty. Examples: Buenos Aires, Argentina: -34 (with minutes LTM = 36) NIST, Gaithersburg, Maryland: 39.137627 (no LTM or LTS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 9
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-90 <= LTD <= 90
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.308_03

Field Name	*Latitude Minute Value (LTM)*
Description	The third information item is latitude minute value / LTM. This is a value that specifies a minute of a degree. The value shall be between 0 (inclusive) to 60 (exclusive). The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall be empty. The minute value is empty, even if the degree value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTM < 60
Look Up Codes	n/a

2.308_04

Field Name	*Latitude Second Value (LTS)*
Description	The fourth information item is the latitude second value / LTS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTS < 60
Look Up Codes	n/a

2.308_05

Field Name	*Longitude Degree Value (LGD)*
Description	The fifth information item is the longitude degree value / LGD. It is a value that specifies the degree of a longitude. The value shall be between -180 (inclusive) and +180 (inclusive). If LTD is present, then LGD shall be present.The degrees may be expressed as whole numbers (without a decimal) or real numbers including decimals. If decimals are present, then minutes and seconds are empty. Examples: Buenos Aires, Argentina: -58 (with minutes LGM = 22) NIST, Gaithersburg, Maryland: -77.216032 (no LGM or LGS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-180 <= LGD <= 180
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.308_06

Field Name	*Longitude Minute Value (LGM)*
Description	The sixth information item is the longitude minute value / LGM. It is a value that specifies a minute of a degree. The value shall be from 0 (inclusive) to 60 (exclusive).The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall not appear. The minute value is empty, even if the degree value is an integer. If LTM is present, then LGM shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGM < 60
Look Up Codes	n/a

2.308_07

Field Name	*Longitude Second Value (LGS)*
Description	The seventh information item is the longitude second value / LGS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer. If LTS is present, then LGS shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGS < 60
Look Up Codes	n/a

2.308_08

Field Name	*Elevation (ELE)*
Description	
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Minus Sign,Period
Value Constraints	-422.000 < ELE < 8848.000; real number
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.308_09

Field Name	*Geodetic Datum Code (GDC)*
Description	The ninth information item is the geodetic datum code / GDC11. It is an alphanumeric value of 3 to 6 characters in length. This information item is used to indicate which coordinate system was used to represent the values in information items 2 through 7. If no entry is made in this information item, then the basis for the values entered in the first eight information items shall be WGS84, the code for the World Geodetic Survey 1984 version - WGS 84 (G873). See look up codes for values.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 6
Char Types	AN
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	GEOGRAPHIC COORDINATE DATUM CODES: AIRY = Airy AUST = Australian National BES = Bessel 1841 BESN = Bessel 1841 (Nambia) CLK66 = Clarke 1866 CLK80 = Clarke 1880 EVER = Everest FIS60 = Fischer 1960 (Mercury) FIS68 = Fischer 1968 GRS67 = GRS 1967 GRS80 = GRS 1980 HELM = Helmert 1906 HOUG = Hough INT = International KRAS = Krassovsky AIRYM = Modified Airy EVERM = Modified Everest FIS60M = Modified Fischer 1960 SA69 = South American 1969 WGS60 = WGS-60 WGS66 = WGS-66 WGS72 = WGS-72 WGS84 = WGS-84 / NAD-83 Other = <entry up to 6 characters>

2.308_10

Field Name	*Geographic Coordinate Universal Transverse Mercator Zone (GCM)*
Description	It is an alphanumeric value of 2 to 3 characters. This is a one or two digit UTM zone number followed by the 8 degree latitudinal band designator (which is a single letter).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	U
Special Chars	None
Value Constraints	One or two integers followed by a single letter
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.308_11

Field Name	*Geographic Coordinate Universal Transverse Mercator Easting (GCE)*
Description	The eleventh information item is the geographic coordinate universal transverse Mercator easting / GCE. It is an integer of 1 to 6 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 6
Char Types	N
Special Chars	None
Value Constraints	integer
Look Up Codes	n/a

2.308_12

Field Name	*Geographic Coordinate Universal Transverse Mercator Northing (GCN)*
Description	The twelfth information item is the geographic coordinate universal transverse Mercator northing / GCN. It is an integer of 1 to 8 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	N
Special Chars	None
Value Constraints	0 <= GCN; integer
Look Up Codes	n/a

2.308_13

Field Name	*Geographic Reference Text (GRT)*
Description	It is a free form text describing a street address or other physical location (such as ‘Corner of Washington and Madison, Geneva, NY’).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 150
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.308_14

Field Name	*Geographic Coordinate Other System Identifier (OSI)*
Description	A fourteenth optional information item geographic coordinate other system identifier / OSI allows for other coordinate systems. This information items specifies the system identifier. It is up to 10 characters in length. Examples are: • MGRS (Military Grid Reference System) • USNG (United States National Grid) • GARS (Global Area Reference System) • GEOREF (World Geographic Reference) • LANDMARK landmark (e.g. hydant) and position relative to the landmark.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.308_15

Field Name	*Geographic Coordinate Other System Value (OCV)*
Description	A fifteenth optional information item, is the geographic coordinate other system value / OCV. It shall only be present if OSI is present in the record. It can be up to 126 characters in length. If OSI is LANDMARK, OCV is free text and may be up to 126 characters. For details on the formatting of OCV for the other coordinate systems shown in OSI as examples, see http://earth-info.nga.mil/GandG/coordsys/grids/referencesys.html .
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

2.400

Field Name	**Action to be Taken**
Description	This field is used to include text answers to submission requests to indicate that a latent case will be established or to indicate recommendations for further actions in either latent or tenprint responses. This field will also be used to indicate action taken in response to electronic document (e.g., disposition) submissions. For the native encoding of this field, commas, hyphens, ampersands, slashes, number signs, and blanks are all allowed as special characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	0 to 300
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.401

Field Name	Search Results Findings
Description	This field is used in responses to submissions and contains a single character. An “I” shall be used to indicate that an identification has been made, and an “N” shall be used to indicate that no identification has been made. For latent comparison results feedback, in addition to “I” or “N,” a pending comparison result will be indicated with a “P.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	NATO STANAG 4715 APPROVED SRF CODES: I = Identification has been made N = No identification has been made P = Pending

2.402

Field Name	Status/Error Message (MSG)
Description	This free-text field will contain reason, status, or error messages that are generated as a result of the processing of a transaction and will be sent back to the submitter. For example, an Unsolicited Unsolved Latent Delete transaction will contain the reason for the deletion of a record. For native encoding, each message will be separated by the RS separator character.
Remarks	Propose to deprecate this with Status Message.
Format	n/a
Num Info Items	0
Num Chars	1 to 300
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.500

Field Name	Retention Indicator (RET)
Description	This is a Y/N field indicting whether the information submitted as a part of a transaction is to be retained in the repository.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	YES_NO CODES: Y = Yes N = No

Type-2 User-Defined Descriptive Text Record

2.501

Field Name	Retention Expiration Date (RET_EXPDT)
Description	The date the retention of the transaction shall cease. If retention is to be unlimited, populate it with all 0's (i.e. 00000000).
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

2.502

Field Name	Attention Indicator (ATN)
Description	This alphanumeric-special field shall contain a designation of the individual to whose attention a response is to be directed. Periods shall not be used (e.g., Det. J. Q. Public shall be entered as DET J Q PUBLIC). The value of ATN returned to the submitter is the value submitted.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 30
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.503

Field Name	Request Secondary Search
Description	This set of fields, if provided, shall indicate which repository, the transaction type and secondary search retention indicator for a secondary search.
Remarks	Coordination required with Repository to be searched before usage.
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

2.503_1

Field Name	*Designated Repository Code (DRC)*
Description	The numeric code for the designation of the repository.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	N
Special Chars	None
Value Constraints	TBD
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.503_2

Field Name	*Request Secondary Search Transaction Type (TOT)*
Description	This field contains an identifier, designating the type of transaction to secondary search and subsequent processing that the logical file should be given.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 10
Char Types	U
Special Chars	None
Value Constraints	To be determined by the exchange partners.
Look Up Codes	n/a

2.503_3

Field Name	*Secondary Search Retention Indicator (RET)*
Description	A value of “Y” means retention is acceptable, a value of “N” means the secondary repository should not retain the submission. Secondary repositories are not necessarily bound by this field and policy may override the value present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	None
Look Up Codes	RETENTION CODES: Y = Submission Retained N = Submission Not Retained

2.504

Field Name	**Encounter Protection (EP)**
Description	The encounter protection fields defined below allow for an incoming submission to identify and conceal associations made with other previously submitted transactions. This set of fields can be used by an individual ORI to either protect or unprotect a single associated match or all associated matches. This field contains information that will be used in the case where a new submission wants the subject’s association(s) to be protected or unprotected. Protection of either an individual encounter or multiple encounters will be decided based on the entries in this field. This field contains two subfields and both must be completed if this field is used.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.504_1

Field Name	*Encounter Protection Function (EP_FUN)*
Description	This field contains information that will be used to determine the action to be taken. It will contain a single numeric value 0=Unprotect, 1=Protect.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	ENCOUNTER PROTECTION FUNCTION CODES: 0 = Unprotect 1 = Protect

2.504_2

Field Name	*Encounter Protection Level (EP_LEVEL)*
Description	This field contains information that will be used to determine the level of protection being assigned to the subject being searched. This field will contain a single numeric value 0 = Single Encounter, 1 = All Encounter.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	ENCOUNTER PROTECTION LEVEL CODES: 0 = Single Encounter 1 = All Encounters

2.505

Field Name	**Caveat (CAV)**
Description	The Caveat set allows a NATO biometric submission file to be annotated with caveat, usage or handling instructions, disclaimer or general information. The set consists of 4 information items: Caveat Originating Agency Identifier, Caveat Date, Caveat Category Code and Caveat Text.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-2 User-Defined Descriptive Text Record

2.505_1

Field Name	*Caveat Originating Agency Identifer*
Description	The identifier of the administration or organization originating the caveat.
Remarks	In some cases, the Caveat Originating Agency is not the same as the Transaction Originating Agency specified in Field 1.008. The Caveat ORI might not be known. Enter 'XXXXXXXXX' if the identifier is not applicable.
Format	n/a
Num Info Items	0
Num Chars	9 to 9
Char Types	ANS
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

2.505_2

Field Name	*Caveat Date (CAV_DT)*
Description	The date when the caveat is published.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

2.505_3

Field Name	*Caveat Category Code (CAV_CAT_CD)*
Description	The kind of caveat described in the text field.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	CAVEAT CODES: CAVEAT = A warning or caution USAGE = Instructions on how to use the content INFO = General Information DISCLAIMER = A statement that formally denies legal claim and renounces some or all liability HANDLING = Instruction on how to coordinate on operations such as packaging and movement of the content

Type-2 User-Defined Descriptive Text Record

2.505_4

Field Name	*Caveat Text (CAV_TXT)*
Description	The specific text for the type of caveat.
Remarks	For example, words describing the retention, non-releasability and searching restriction may be in the 'Caveat Text' information item. The the first 1500 characters should be used for the Caveat Text itself. The remaining portion is opened for other usage such as Partner Nation contact information.
Format	n/a
Num Info Items	0
Num Chars	1 to 3,000
Char Types	U
Special Chars	Any
Value Constraints	n/a
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.001

Field Name	Record Header (LEN - for Traditional Encoding only)
Description	The record header appears as the first field (xx.001) in each Record Type. It contains information particular to the encoding format chosen, in order to enable proper reading of the record. In Traditional encoding, this field contains the record length in bytes (including all information separators). In NIEM-conformant XML encoding, this field contains the RecordCategoryCode, which is the numeric representation of the Record Type.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	N
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

10.002

Field Name	Information Designation Character (IDC)
Description	Each of the records present in a transaction, with the exception of the Type-1 record, shall include a field (xx.002) containing the information designation character / IDC. The value of the IDC shall be a sequentially assigned positive integer starting from zero and incremented by one up to a maximum of 99. IDC references are stated in Type-1 Field 1.003 Transaction content / CNT and shall be used to relate information items in the CNT field of the Type-1 record to the other records in the transaction. Two or more records may share a single IDC solely to identify and link together records that pertain to different representations of the same biometric trait.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= IDC <= 99; integer
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.003

Field Name	Image Type (IMT)
Description	Indicate the type of image contained in the Type-10 record.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 11
Char Types	AS
Special Chars	Blank,Hyphen
Value Constraints	See Look Up Codes
Look Up Codes	TYPE-10 IMAGE CODES: FACE = FACE SCAR = Scar MARK = MARK TATTOO = TATTOO FRONTAL-C = Frontal-C REAR-C = Rear-C FRONTAL-N = Frontal-N REAR-N = Rear-N TORSO-BACk = Torso-Back TORSO-FRONT = Torso-Front CONDITION = Condition MISSING = Missing OTHER = Other CHEST = Chest FEET = Feet HANDS-PALM = Hands-Palm HANDS-BACK = Hands-Back GENITALS = Genitals BUTTOCKS = Buttocks RIGHT LEG = Right Leg LEFT LEG = Left Leg RIGHT ARM = Right Arm LEFT ARM = Left Arm

10.004

Field Name	Source Agency (SRC)
Description	This is the identifier of the agency that actually created the record and supplied the information contained in it.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.005

Field Name	Photo Capture Date (PHD)
Description	This mandatory field shall contain the date that the image contained in the record was captured.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

10.006

Field Name	Horizontal Line Length (HLL)
Description	HLL defines the number of pixels contained on a single horizontal line of the image. The maximum horizontal size is limited to 65,535 pixels in Record Types-4 and 8, and to 99,999 for other record types. The minimum value is 10 pixels. The total image size (HLL times VLL) must be able to be accommodated in Field xx.001 for Traditional encoding.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 5
Char Types	N
Special Chars	None
Value Constraints	10 <= HLL <= 99999; positive interger
Look Up Codes	n/a

10.007

Field Name	Vertical Line Length (VLL)
Description	VLL defines the number of horizontal lines contained in the image. The maximum vertical size is limited to 65,535 pixels in Record Types-4 and 8, and to 99,999 for other record types. The minimum value is 10 pixels.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 5
Char Types	N
Special Chars	None
Value Constraints	10 <= HLL <= 99999; positive integer
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.008

Field Name	Scale Units (SLC)
Description	The image sampling frequency (pixel density). A value of “1” shall indicate pixels per inch. A value of “2” shall indicate pixels per centimeter. A value of “0” in this field indicates that no scale is provided, and the quotient of THPS/TVPS shall provide the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	0 <= SLC <= 2; integer
Look Up Codes	SCALE UNIT CODES: 1 = Pixels Per Inch 2 = Pixels Per Centimeter 0 = No Scale

10.009

Field Name	Transmitted Horizontal Pixel Scale (THPS)
Description	This is the integer pixel density used in the horizontal direction of the image if SLC has a value of “1” or “2”. If SLC has a value of “0”, this information item shall contain the horizontal component of the pixel aspect ratio, up to 5 integer digits. For example, if the SLC value = 1, then the value of THPS could be ‘1000’ for a 1000 ppi sensor.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

10.010

Field Name	Transmitted Vertical Pixel Scale (TVPS)
Description	This is the integer pixel density used in the vertical direction of the image if SLC has a value of “1” or “2”. If SLC has a value of “0”, this information item shall contain the vertical component of the pixel aspect ratio, up to 5 integer digits. If SLC is 1 or 2, then TVPS shall equal THPS.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.011

Field Name	Compression Algorithm (CGA)
Description	This is a mandatory field. It shall specify the algorithm used to compress the transmitted color or grayscale images.
Remarks	WSQ is not supported. The image shall be represented as an array of n rows by m columns by at least 8-bit pixels. Each pixel in a monochrome image shall be represented by eight or more bits. Color images shall be represented as a series of sequential samples of a red, green, and blue intensity for each pixel. The image shall be organized in row-major order, with the lowest address corresponding to the upper left corner of the image. For those images that are to be compressed, the method for the compression of facial and SMT images is specified by the baseline mode of the JPEG, JPEG 2000, or PNG algorithms.
Format	n/a
Num Info Items	0
Num Chars	3 to 5
Char Types	AN
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	IMAGE COMPRESSION ALGORITHM CODES: NONE = Uncompressed WSQ20 = WSQ Version 2.0 JPEGB = JPEG ISO/IEC 10918 (Lossy) JPEGL = JPEG ISO/IEC 10918 (Lossless) JP2 = JPEG 2000 ISO/IEC 15444-1 (Lossy) JP2L = JPEG 2000 ISO/IEC 15444-1 (Lossless) PNG = Portable Network Graphics

10.012

Field Name	Color Space (CSP)
Description	It shall contain an entry from the lookup codes below.
Remarks	See ANSI/NIST ITL 1-2011, section on Color, black-and-white, and grayscale image requirements for detail.
Format	n/a
Num Info Items	0
Num Chars	3 to 4
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	COLOR SPACE CODES: UNK = Undefined GRAY = Grayscale (monochrome) RGB = Undetermined color space for an RGB image SRGB = SRGB (IEC 61966-2-1) YCC = YCbCr (legacy) SYCC = YCbCr (JPEG 2000 compressed)

Type-10 Facial, Other Body Part and SMT Image Record

10.013

Field Name	Subject Acquisition Profile (SAP)
Description	To provide a general description of the criteria under which the facial image was captured. Typically, the higher the value, the stronger the acquisition requirements become. Therefore, in the text below, the SAP value will also be denoted as a “level”.
Remarks	The Subject Acquisition Profile (SAP) is a mandatory ASCII text field when [Type-10 Image Type field] contains "FACE”.
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	ACQUISITION PROFILE CODES: 0 = Unknown profile 1 = Surveillance facial image 10 = Driver’s license image (AAMVA) 11 = ANSI Full Frontal facial image (ANSI 385) 12 = ANSI Token facial image (ANSI 385) 13 = ISO Full Frontal facial image (ISO/IEC 19794-5) 14 = ISO Token facial image (ISO/IEC 19794-5) 15 = PIV facial image (NIST SP 800-76) 20 = Legacy Mugshot 30 = Best Practice Application - Level 30 40 = Best Practice Application - Level 40 50 = Best Practice Application - Level 50 51 = Best Practice Application - Level 51 32 = Mobile ID Best Practice - Level 32 42 = Mobile ID Best Practice - Level 42 52 = Mobile ID Best Practice - Level 52

10.014

Field Name	Face Image Bounding Box Coordinates in Full Image (FIP)
Description	If the face image (IMT = 'FACE') contains more than one face, or is not cropped to a “head only” or “head and shoulders” composition, this optional field contains offsets to the location of the bounding box of the face of the subject within a larger image. This field is only appropriate for images that do not comply with SAP Levels 30, 40, 50 or 51, because those images shall be cropped to a “head only” or “head and shoulders” composition. If the image contains more than one face, the bounding box indicates the face of interest; all associated Type-10 fields are limited to the face defined by the bounding box in the larger image.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.014_1

Field Name	*Left Horizontal Coordinate (LHC)*
Description	It is the horizontal offset in pixels to the left edge of the bounding box relative to the origin positioned in the upper left corner of the image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= LHC <= HLL; positive integer
Look Up Codes	n/a

10.014_2

Field Name	*Right Horizontal Coordinate (RHC)*
Description	It is the horizontal offset in pixels to the right edge of the bounding box relative to the origin positioned in the upper left corner of the image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= RHC <= HLL; positive integer; RHC > LHC
Look Up Codes	n/a

10.014_3

Field Name	*Top Vertical Coordinate (TVC)*
Description	The vertical offset (pixel counts down) to the top of the bounding box.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= TVC <= VLL; positive integer
Look Up Codes	n/a

10.014_4

Field Name	*Bottom Vertical Coordinate (BVC)*
Description	It is the vertical offset from the upper left corner of the image down to the bottom of the bounding box. It is counted in pixels.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= BVC <= VLL; positive integer; BVC > TVC
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.014_5

Field Name	*Bounding Box Head Position Code (BBC)*
Description	The fifth information item of FIP is the bounding box type, indicating the contents of the bounding box. If this field is omitted, the default value shall be H (Head only).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	FACE POSITION VALUES: S = Head and shoulders: the image within the bounding box is compliant with a “head and shoulders” composition (full frontal) H = Head only: the image within the bounding box is compliant with a “head only” composition F = Face only: the image within the bounding box contains a subject's two eyes, nose and mouth N = Non-frontal head: the image within the bounding box contains the subject's entire head, but it is not frontal-facing or is otherwise not compliant with a “head only” composition X = Partial face: the composition consists of a partial face, containing less than two eyes, nose and mouth

10.015

Field Name	**Face Image Path Coordinates in Full Image (FPFI)**
Description	If the face image (IMT = 'FACE') contains more than one face, or is not cropped to a “head only” or “head and shoulders” composition, this optional field contains offsets to the location of the path defining a region containing the face of the subject within a larger image. This field is only appropriate for images that do not comply with SAP Levels 30, 40, 50 or 51, because those images shall be cropped to a “head only” or “head and shoulders” composition.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.015_1

Field Name	*Boundary Code (BYC)*
Description	Defines the shape of a boundary of a feature within an image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	BYC = C, E or P; see Look Up Codes
Look Up Codes	BOUNDARY DEFINITION CODES: C = Circle E = Ellipse P = Polygon

Type-10 Facial, Other Body Part and SMT Image Record

10.015_2

Field Name	*Number of Points (NOP)*
Description	Specifies the number of vertices.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	2 <= NOP <= 99; positive integer
Look Up Codes	n/a

10.015_3

Field Name	*Horizontal Point Offset (HPO)*
Description	The pixel counts to the right.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= HPO <= HLL; positive integer
Look Up Codes	n/a

10.015_4

Field Name	*Vertical Point Offset (VPO)*
Description	The pixel counts down from the origin.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= VPO <= VLL; positive integer
Look Up Codes	n/a

10.016

Field Name	**Scanned Horizontal Pixel Scale (SHPS)**
Description	This ASCII field shall specify the horizontal pixel density used for scanning providing the SLC field contains a "1" or a "2". Otherwise, it indicates the horizontal component of the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.017

Field Name	Scanned Vertical Pixel Scale (SVPS)
Description	This ASCII field shall specify the vertical pixel density used for scanning providing the SLC field contains a "1" or a "2". Otherwise, it indicates the vertical component of the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

10.018

Field Name	Distortion (DIST)
Description	This field (which can be used only if IMT is 'FACE') contains the type of distortion, whether it is estimated or calculated, and its relative severity.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.018_1

Field Name	*Distortion Code (IDK)*
Description	The first information item of the Distortion (DIST) field is the distortion code.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	6 to 10
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	DISTORTION CODES: Barrel = Image appears to be spherized Inflated = wide angle or fisheye distortion Pincushion = image 'pinched' at the center or 'bowed inwards'

Type-10 Facial, Other Body Part and SMT Image Record

10.018_2

Field Name	*Distortion Measurement Code (IDM)*
Description	The second information item of the Distortion field (DIST) is an alphabetic code, which is a distortion measurement code (IDM), that indicates if the distortion is estimated “E” or calculated “C”.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	DISTORTION MEASUREMENT CODES: E = estimated C = Calculated

10.018_3

Field Name	*Distortion Severity Code (DSC)*
Description	The third information item of the Distortion field (DIS) is the distortion severity code (DSC).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 8
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	DISTORTION SEVERITY CODES: Mild = mild Moderate = moderate Severe = Severe

10.019

Field Name	**Lighting Artifacts (LAF)**
Description	This optional field (contains the type of lighting artifacts found in the Type-10 image record. It is only applicable to face images (IMT = 'FACE'). Multiple lighting artifacts may be repeated as separate subfields.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	LIGHTING ARTIFACTS CODES: F = Face shadows H = Hot spots R = Reflections from eye glasses

Type-10 Facial, Other Body Part and SMT Image Record

10.020

Field Name	Subject Pose (POS)
Description	This field is to be used for the exchange of facial image data. When included, this field shall contain one ASCII character code selected from [possible codes below] to describe the pose of the subject. For the angled pose entry "A", [Type-10 Pose Offset Angle field] shall contain the offset angle from the full face orientation. For the determined 3D pose entry "D", [Type-10 Subject Post Angles field] shall contain a set of determined 3D pose angles (i.e., Yaw, Pitch, and Roll angles) away from the full frontal face orientation. Note that the offset angle in [Type-10 Pose Offset Angle field] is opposite from the yaw angle in [Type-10 Subject Post Angles field] as indicated by a minus sign.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	SUBJECT POSE CODES: F = Full Face Frontal R = Right Profile (90 degree) L = Left Profile (-90 degree) A = Angled Pose D = Determined 3D Pose

10.021

Field Name	Pose Offset Angle (POA)
Description	This field shall only be used for the exchange of facial image data if [Type-10 Subject Pose field] (POS) contains an "A" to indicate an angled pose of the subject. This field should be omitted for a full face or a profile. This ASCII field specifies the pose position of the subject at any possible orientation within a circle. Its value shall be to a nearest degree. The offset angle shall be measured from the full-face pose position and have a range of values from -180 degrees to +180 degrees. A positive angle is used to express the angular offset as the subject rotates from a full-face pose to their right (approaching a left profile). A negative angle is used to express the angular offset as the subject rotates from a full-face pose to their left (approaching a right profile). If the entry in the POS field is an "F", "L", or "R", the contents of this field are ignored.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	NS
Special Chars	Minus Sign
Value Constraints	-180 <= POA <= 180; integer
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.023

Field Name	Photo Acquisition Source (PAS)
Description	This field shall specify the classification of the source of the image contained in this record.
Remarks	This field is required if the SAP entry [Type-10 Subject Acquisition Profile field] is "40" or greater. When included, this field shall contain an ASCII character code selected from [possible codes below] to describe the source of captured image data. The "VENDOR" category is used to enter unlisted or miscellaneous source attributes of the facial image. This information shall be entered as a two-information item subfield. The first is "VENDOR" followed by a separator, followed by the unformatted text used to describe the attribute.
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.023_1

Field Name	*Photo Attribute Code (PAC)*
Description	The first information item in the Photo Acquisition Source (PAS) field shall contain an attribute code to describe the source of captured image data.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	6 to 14
Char Types	ANS
Special Chars	Blank
Value Constraints	see Look Up Codes
Look Up Codes	PHOTO ACQUISITION SOURCE CODES: UNSPECIFIED = Unspecified or unknown UNKNOWN PHOTO = Static photograph from an unknown source DIGITAL CAMERA = Static photograph from a digital still-image camera SCANNER = Static photograph from a scanner UNKNOWN VIDEO = Single video frame from an unknown source ANALOGUE VIDEO = Single video frame from an analogue video camera DIGITAL VIDEO = Single video frame from a digital video camera VENDOR = Vendor Specific source TYPE20 = Record Type-20 original source representation OTHER = Another Source Image

10.023_2

Field Name	*Vendor Specific Description (VSD)*
Description	This information item is the unformatted text used to describe the attribute for Type-10 Photo Acquisition Source field's first information item when the Acquisition Source Type Code is "VENDOR".
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.024

Field Name	Subject Quality Score (SQS)
Description	This ASCII field shall specify quality score data for facial images stored in this record. Each subfield shall contain three information items separated by the "US" separator character. They identify a quality score and the algorithm used to create the quality score. This information is useful to enable the recipient of the quality score to differentiate between quality scores generated by different algorithms and adjust for any differences in processing or analysis as necessary.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.024_1

Field Name	*Quality Value (QVU)*
Description	This information item shall contain the integer image quality score between 0 and 100 (inclusive) assigned to the image data by a quality algorithm. Higher values indicate better quality. An entry of “255” shall indicate a failed attempt to calculate a quality score. An entry of “254” shall indicate that no attempt to calculate a quality score was made.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	0 <= QVU <= 100; integer or QVU = 254 or 255
Look Up Codes	n/a

10.024_2

Field Name	*Algorithm Vendor Identification (QAV)*
Description	This information item shall specify the ID of the vendor of the quality algorithm used to calculate the quality score. This 4-digit hex value is assigned by IBIA and expressed as four ASCII characters. The IBIA shall maintain the Vendor Registry of CBEFF Biometric Organizations that will map the value in this field to a registered organization.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 4
Char Types	H
Special Chars	None
Value Constraints	0000 <= QAV <= FFFF
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.024_3

Field Name	*Algorithm Product Identification (QAP)*
Description	This information item shall specify a numeric product code assigned by the vendor of the quality algorithm, which may be registered with the IBIA, but it is not required to be registered. It indicates which of the vendor's algorithms was used in the calculation of the quality score. This field contains the ASCII representation of the integer product code and should be within the range 1 to 65535.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= QAP <= 65535; positive integer
Look Up Codes	n/a

10.025

Field Name	**Subject Pose Angles (SPA)**
Description	This ASCII set shall be present when [TYPE-10 Subject Pose field] (POS) contains a "D" to indicate a set of determined 3D pose angles of the same subject. If the entry in the [TYPE-10 Subject Pose] POS Field is an "F", "L", or "R", the contents of this field are ignored. When present, this information shall be entered as three or six information items. The first three items specify the pose of the subject estimated or measured at constrained possible orientations within a sphere. Each angle value shall be to the nearest integer degree. The second triple information items is not present, then the uncertainty in the angles is not determined. Notes, ANNEX E in ITL 1-2011 contains, additional information, details, and examples of the subject pose angles.
Remarks	n/a
Format	n/a
Num Info Items	6
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.025_1

Field Name	*Yaw Angle (YAW)*
Description	This information item is the Yaw angle (rotation about the vertical 'y' axis).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	NS
Special Chars	Minus Sign
Value Constraints	-180 <= YAW <=180; integer
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.025_2

Field Name	*Pitch Angle (PIT)*
Description	This information item is the Pitch angle (rotation about 'x' horizontal axis).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	NS
Special Chars	Minus Sign
Value Constraints	-90 <= PIT <= 90; integer
Look Up Codes	n/a

10.025_3

Field Name	*Roll Angle (ROL)*
Description	This information Item is the Roll angle (rotation about the 'z' axis).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	NS
Special Chars	Minus Sign
Value Constraints	-180 <= ROL <= 180; integer
Look Up Codes	n/a

10.025_4

Field Name	*Uncertainty in Degrees for Yaw (YAWU)*
Description	The measure of uncertainty concerning the rotation about the vertical or Y axis of the pose.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= YAWU <= 90; integer
Look Up Codes	n/a

10.025_5

Field Name	*Uncertainty in Degrees for Pitch (PITU)*
Description	The measure of uncertainty concerning the rotation about horizontal or X axis of the pose.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= PITU <= 90; integer
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.025_6

Field Name	*Uncertainty in Degrees for Roll (ROLU)*
Description	The measure of uncertainty concerning the rotation about the Z axis of the pose.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= ROLU <= 90; integer
Look Up Codes	n/a

10.026

Field Name	**Subject Facial Description (SXS)**
Description	Describe the facial expression of the subject and other attributes associated with the subject's captured facial image. This field may have one or more subfields each containing a single information item. For "Physical Characteristic", enter a characteristic as listed in the Ninth (or current) Edition of the NCIC Code Manual, December, 2000. For the "Other Characteristic" enter unlisted or miscellaneous attributes as unformatted text used to describe the attribute. Multiple attributes may be listed but must be separated.
Remarks	
Format	n/a
Num Info Items	0
Num Chars	3 to 20
Char Types	AS
Special Chars	Blank
Value Constraints	see Look Up Codes
Look Up Codes	FACIAL DESCRIPTION CODES: UNKNOWN = Expression unspecified NEUTRAL = Neutral (non-smiling) with both eyes mouth closed) SMILE = Smiling where the inside of the mouth and/or teeth is not exposed (closed jaw) MOUTH OPEN = Subject Having Mouth open TEETH VISIBLE = Having Teeth visible RAISED BROWS = Raising eyebrows FROWNING = Frowning EYES AWAY = Looking away from the camera SQUINTING = Squinting LEFT EYE PATCH = Subject Wearing Left Eye Patch RIGHT EYE PATCH = Subject Wearing Right Eye Patch CLEAR GLASSES = Subject Wearing Clear Glasses DARK GLASSES = Subject Wearing Dark or Visible Colored Glasses (medical) HAT = Head covering/hat SCARF = Wearing Scarf MOUSTACHE = Having Moustache BEARD = Having Beard NO EAR = Ear(s) obscured by hair BLINK = Blinking (either or both eyes closed) Distorting Condition = Having Distorting Medical Feature Point detection From Annex D of ANSI/NIST ITL 1-2011 = Physical Characteristics Alphabetic Text, up to 20 characters = Other Characteristics

Type-10 Facial, Other Body Part and SMT Image Record

10.027

Field Name	Subject Eye Color (SEC)
Description	Describe the eye color of the subject as seen in the photograph. If unusual or unnatural such as may be the case when colored contact lenses are present and the “real” eye color cannot be ascertained, then the color should be labeled as “XXX”. Eye color attributes and attribute codes are given by possible codes.
Remarks	
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	ALPHA EYE COLOR CODES: BLK = Black BLU = Blue BRO = Brown GRN = Green GRY = Gray HAZ = Hazel MAR = Maroon MUL = Multicolored PNK = Pink XXX = Unknown

10.028

Field Name	Subject Hair Color (SHC)
Description	Describes the hair color of the subject as seen in the photograph.
Remarks	For unusual or unnatural colors not listed in the possible codes, or the "real" color cannot be ascertained, the hair color should be labeled as “XXX”. If the subject is completely bald, or has a completely shaved head, then the hair color shall be labeled as “BAL”. When the subject is predominantly bald, but hair color is discernable, then the appropriate hair color attribute code shall follow “BAL”.
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	HAIR COLOR CODES: XXX = Unknown BAL = Bald BLK = Black BLN = Blond or Strawberry BRO = Brown GRY = Gray or Partially Gray RED = Red or Auburn SDY = Sandy WHI = White BLU = Blue GRN = Green ONG = Orange PNK = Pink PLE = Purple STR = Streaked

Type-10 Facial, Other Body Part and SMT Image Record

10.029

Field Name	2D Facial Feature Points (FFP)
Description	The ASCII set shall be used for the exchange of facial image data. When present, it shall describe special attributes of manually or automatically detected facial feature points of the captured facial image. This information shall be entered as a four-information item feature point block. Multiple facial points may be listed using these four information items. But each feature block must be separated.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.029_1

Field Name	*Feature Point Type (FPT)*
Description	The first information item of 2D Facial Feature Points (FFP) or 3D Facial Feature Points (3DF) is a one character value. It is mandatory. It shall be either 1 = Denoting an MPEG4 Feature point. 2 = Anthropometric landmark. (new in ANSI/NIST ITL 1-2011).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	FPT = 1 or 2
Look Up Codes	FEATURE POINT CODES: 1 = Denoting an MPEG4 Feature point. 2 = Anthropometric landmark. (This is new to this version).

10.029_2

Field Name	*Feature Point Code (FPC)*
Description	The second information item, feature point code / FPC is 3 to 5 characters. If FPT is 1, this information item shall be “A.B” with A and B defined in Section 8.10.28.1 of ANSI/NIST ITL 1-2011. and illustrated in Figure 14. The allowed special character is a period. If FPT is 2, the codes are entered as shown in the “Feature Point ID” column of Table 65. Note that this entry is one to four alphabetic characters.
Remarks	n/a
Format	N.N, N.NN, NN.N, NN.NN, a, aa, aaa or aaaa
Num Info Items	0
Num Chars	3 to 5
Char Types	ANS
Special Chars	Period
Value Constraints	see ANSI/NIST ITL 1-2011

Type-10 Facial, Other Body Part and SMT Image Record

Look Up Codes	EYE AND NOSTRIL CENTER FEATURE POINT CODES: 12.1 = Left Eye 12.2 = Right Eye 12.3 = Left Nostril 12.4 = Right Nostril 3.7, 3.11 = Midpoint of Feature Points for Left Eye 3.8, 3.12 = Midpoint of Feature Points for Right Eye 9.1, 9.15 = Midpoint of Feature Points for Horizontal Left Hostril 9.3, 9.15 = Midpoint of Feature Points for Vertical Left Nostril 9.2, 9.15 = Midpoint of Feature Points for Horizontal Right Hostril 9.3, 9.15 = Midpoint of Feature Points for Vertical Right Hostril FEATURE POINT ID & MPEG4 FEATURE POINT FOR ISO DEFINITIONS OF THE ANTHROPOMETRIC LANDMARKS: v, 11.4 = vertex (The highest point of head when the head is oriented in Frankfurt Horizon.) g = glabella (The most prominent middle point between the eyebrows) op = opisthocranion (Situated in the occipital region of the head is most distant from the glabella) eu = eurion (The most prominent lateral point on each side of the skull in the area of the parietal and temporal bones) ft = frontotemporale (The point on each side of the forehead, laterally from the elevation of the linea temporalis) tr, 11.1 = trichion (The point on the hairline in the midline of the forehead) y = zygion (The most lateral point of each of the zygomatic bones) go, 2.15, 2.16 = gonion (The most lateral point on the mandibural angle close to the bony gonion) sl = sublabiale (Determines the lower border of the lower lip or the upper border of the chin) pg, 2.10 = pogonion (The most anterior midpoint of the chin, located on the skin surface in the front of the identical bony landmark of the mandible) gn, 2.11 = menton (or gnathion) (The lowest median landmark on the lower border of the mandible) cdl = condylion laterale (The most lateral point on the surface of the condyle of the mandible) en, 3.11, 3.8 = endocanthion (The point at the inner commissure of the eye fissure) ex, 3.7, 3.12 = exocanthion (or ectocanthion) (The point at the outer commissure of the eye fissure) p, 3.5, 3.6 = center point of pupil (Is determined when the head is in the rest position and the eye is looking straight forward) or, 3.9, 3.10 = orbitale (The lowest point on the lower margin of each orbit) ps, 3.1, 3.2 = palpebrale superius (The highest point in the mid-portion of the free margin of each upper eyelid) pi, 3.3, 3.4 = palpebrale inferious (The lowest point in the mid-portion of the free margin of each lower eyelid) os = obitale superius (The highest point on the lower border of the eyebrow) sci, 4.3, 4.4 = superciliare (The highest point on the upper border in the mid-portion of each eyebrow) n = nasion (The point in the middle of both the nasal root and nasofrontal suture) se = sellion (or subnasion) (Is the deepest landmark located on the bottom of the nasofrontal angle) al, 9.1, 9.2 = alare (The most lateral point on each alar contour) prn, 9.3 = pronasale (The most protruded point of the apex nasi) sn, 9.15 = subnasale (The midpoint of the angle at the columella base where the lower border of the nasal septum and the surface of the upper lip meet) sbal = subalare (The point at the lower limit of each alar base, where the alar base disappears into the skin of the upper lip) ac, 9.1, 9.2 = alar curvature (or alar crest) point (The most lateral point in the curved base line of each alar) mf, 9.6, 9.7 = maxillofrontale (The base of the nasal root medially from each endocanthi)

Type-10 Facial, Other Body Part and SMT Image Record

10.029_3

Field Name	*X Coordinate (HCX)*
Description	The third information item of the 2D Facial Feature Points (FFD) or 3D Facial Feature Points (3DF). It is 1 to 5 characters, denoting the pixel count horizontally to the right from the upper left pixel, which is set to 0.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= HCX <= HLL; positive integer
Look Up Codes	n/a

10.029_4

Field Name	*Y Coordinate (HCY)*
Description	The fourth information item of the 2D Facial Feature Points (FFD) or 3D Facial Feature Points (3DF). It is 1 to 5 characters, denoting the pixel count vertically down from the upper left pixel, which is set to 0.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= HCY <= VLL; positive integer
Look Up Codes	n/a

10.030

Field Name	**Device Monitoring Mode (DMM)**
Description	This field provides information describing the human monitoring operation of the image capture device. This field will contain an entry from [possible codes below] to indicate the monitoring mode of the biometric sample capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	7 to 10
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	BIOMETRIC CAPTURE DEVICE MONITORING MODE CODES: CONTROLLED = Operator physically controls the subject to acquire biometric sample ASSISTED = Person available to provide assistance to subject submitting the biometric OBSERVED = Person present to observe operation of the device but provides no assistance UNATTENDED = No one present to observe or provide assistance UNKNOWN = No information is known

Type-10 Facial, Other Body Part and SMT Image Record

10.031

Field Name	Tiered Markup Collection (TMC)
Description	This optional field describes the specific facial (IMT = 'FACE') feature points contained in Field 10.029: 2D Facial feature points / FFP and if level 5, contours shall be contained in Field 10.033: Feature contours / FEC.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	integer; see Look Up Codes
Look Up Codes	TIERED MARKUP COLLECTIONS CODES: 1 = Eye centers 2 = Eye, mouth 3 = Eyes, nose, mouth 4 = Eyes, nose, mouth, and head 5 = Facial feature points and contours for eyes, brows, nose, mouth and face outline 6-99 = Reserved 100-999 = User-Defined.

10.032

Field Name	3D Facial Feature Points (3DF)
Description	The optional field shall describe special attributes of manually or automatically detected facial feature points of the captured facial image(IMT = 'FACE'). It shall be entered as a five-information item feature point block in a subfield. Multiple facial points may be listed using these information items, each in a separate subfield. The maximum number of feature points is 88. This field contains a Z coordinate.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.032_1

Field Name	*Feature Point Type (FPT)*
Description	The first information item of 2D Facial Feature Points (FFP) or 3D Facial Feature Points (3DF) is a one character value. It is mandatory. It shall be either 1 = Denoting an MPEG4 Feature point. 2 = Anthropometric landmark. (new in ANSI/NIST ITL 1-2011).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	FPT = 1 or 2
Look Up Codes	FEATURE POINT CODES: 1 = Denoting an MPEG4 Feature point. 2 = Anthropometric landmark. (This is new to this version).

Type-10 Facial, Other Body Part and SMT Image Record

10.032_2

Field Name	*Feature Point Code (FPC)*
Description	The second information item, feature point code / FPC is 3 to 5 characters. If FPT is 1, this information item shall be “A.B” with A and B defined in Section 8.10.28.1 of ANSI/NIST ITL 1-2011. and illustrated in Figure 14. The allowed special character is a period. If FPT is 2, the codes are entered as shown in the “Feature Point ID” column of Table 65. Note that this entry is one to four alphabetic characters.
Remarks	n/a
Format	N.N, N.NN, NN.N, NN.NN, a, aa, aaa or aaaa
Num Info Items	0
Num Chars	3 to 5
Char Types	ANS
Special Chars	Period
Value Constraints	see ANSI/NIST ITL 1-2011

Type-10 Facial, Other Body Part and SMT Image Record

Look Up Codes	EYE AND NOSTRIL CENTER FEATURE POINT CODES: 12.1 = Left Eye 12.2 = Right Eye 12.3 = Left Nostril 12.4 = Right Nostril 3.7, 3.11 = Midpoint of Feature Points for Left Eye 3.8, 3.12 = Midpoint of Feature Points for Right Eye 9.1, 9.15 = Midpoint of Feature Points for Horizontal Left Hostril 9.3, 9.15 = Midpoint of Feature Points for Vertical Left Nostril 9.2, 9.15 = Midpoint of Feature Points for Horizontal Right Hostril 9.3, 9.15 = Midpoint of Feature Points for Vertical Right Hostril FEATURE POINT ID & MPEG4 FEATURE POINT FOR ISO DEFINITIONS OF THE ANTHROPOMETRIC LANDMARKS: v, 11.4 = vertex (The highest point of head when the head is oriented in Frankfurt Horizon.) g = glabella (The most prominent middle point between the eyebrows) op = opisthocranion (Situated in the occipital region of the head is most distant from the glabella) eu = eurion (The most prominent lateral point on each side of the skull in the area of the parietal and temporal bones) ft = frontotemporale (The point on each side of the forehead, laterally from the elevation of the linea temporalis) tr, 11.1 = trichion (The point on the hairline in the midline of the forehead) y = zygion (The most lateral point of each of the zygomatic bones) go, 2.15, 2.16 = gonion (The most lateral point on the mandibural angle close to the bony gonion) sl = sublabiale (Determines the lower border of the lower lip or the upper border of the chin) pg, 2.10 = pogonion (The most anterior midpoint of the chin, located on the skin surface in the front of the identical bony landmark of the mandible) gn, 2.11 = menton (or gnathion) (The lowest median landmark on the lower border of the mandible) cdl = condylion laterale (The most lateral point on the surface of the condyle of the mandible) en, 3.11, 3.8 = endocanthion (The point at the inner commissure of the eye fissure) ex, 3.7, 3.12 = exocanthion (or ectocanthion) (The point at the outer commissure of the eye fissure) p, 3.5, 3.6 = center point of pupil (Is determined when the head is in the rest position and the eye is looking straight forward) or, 3.9, 3.10 = orbitale (The lowest point on the lower margin of each orbit) ps, 3.1, 3.2 = palpebrale superius (The highest point in the mid-portion of the free margin of each upper eyelid) pi, 3.3, 3.4 = palpebrale inferious (The lowest point in the mid-portion of the free margin of each lower eyelid) os = obitale superius (The highest point on the lower border of the eyebrow) sci, 4.3, 4.4 = superciliare (The highest point on the upper border in the mid-portion of each eyebrow) n = nasion (The point in the middle of both the nasal root and nasofrontal suture) se = sellion (or subnasion) (Is the deepest landmark located on the bottom of the nasofrontal angle) al, 9.1, 9.2 = alare (The most lateral point on each alar contour) prn, 9.3 = pronasale (The most protruded point of the apex nasi) sn, 9.15 = subnasale (The midpoint of the angle at the columella base where the lower border of the nasal septum and the surface of the upper lip meet) sbal = subalare (The point at the lower limit of each alar base, where the alar base disappears into the skin of the upper lip) ac, 9.1, 9.2 = alar curvature (or alar crest) point (The most lateral point in the curved base line of each alar) mf, 9.6, 9.7 = maxillofrontale (The base of the nasal root medially from each endocanthi)

Type-10 Facial, Other Body Part and SMT Image Record

10.032_3

Field Name	*X Coordinate (HCX)*
Description	The third information item of the 2D Facial Feature Points (FFD) or 3D Facial Feature Points (3DF). It is 1 to 5 characters, denoting the pixel count horizontally to the right from the upper left pixel, which is set to 0.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= HCX <= HLL; positive integer
Look Up Codes	n/a

10.032_4

Field Name	*Y Coordinate (HCY)*
Description	The fourth information item of the 2D Facial Feature Points (FFD) or 3D Facial Feature Points (3DF). It is 1 to 5 characters, denoting the pixel count vertically down from the upper left pixel, which is set to 0.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= HCY <= VLL; positive integer
Look Up Codes	n/a

10.032_5

Field Name	*Z Coordinate (HCZ)*
Description	The fifth information item of the 3D Facial Feature Points (3DF) field. It is 1 to 5 characters, denoting the pixel count from the X-Y plane, which is set to 0.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= HCZ <= 65535; positive integer
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.033

Field Name	Feature Contours (FEC)
Description	Each subfield (See Section 7.8.2) refers to a specific contour on the face (IMT = 'FACE') and contains a minimum of three points.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.033_1

Field Name	*Feature Contour Codes (FCC)*
Description	The first information item of the Feature Contour (FEC).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 14
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	FEATURE CONTOUR CODE DESCRIPTIONS: eyetop = Bottom of upper eye lid eyebottom = Top of lower eye lid upperliptop = Top of upper lip upperlipbottom = Bottom of upper lip lowerliptop = Top of lower lip lowerlipbottom = Bottom of lower lip rightnostril = Subject's right nostril leftnostril = Subject's left nostril lefteyebrow = Curvature of top of subject's left eye socket righteyebrow = Curvature of top of subject's right eye socket chin = Chin faceoutline = Face outline includes the entire head, all facial hair, and ears

10.033_2

Field Name	*Number of Points (NOP)*
Description	Specifies the number of vertices.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	3 <= NOP <= 99
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.033_3

Field Name	*Horizontal Point Offset (HPO)*
Description	The pixel counts to the right.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= HPO <= HLL
Look Up Codes	n/a

10.033_4

Field Name	*Vertical Point Offset (VPO)*
Description	The pixel counts down from the origin.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= VPO <= VLL
Look Up Codes	n/a

10.038

Field Name	**Comment (COM)**
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.039

Field Name	Type-10 Reference Number (T10)
Description	This is an optional field. It is used when several images cover either the entire SMT or portions of it. The same T10 is used when referring to a particular image. This field shall not be used if there are no multiple images of the same SMT or body part in the transaction. It can be used for any image type specified in Field 10.003: Image type / IMT .
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= T10 <= 255; positive integer
Look Up Codes	n/a

10.040

Field Name	NCIC SMT Code (SMT)
Description	This field shall be used only when Field 10.003: Image type / IMT = “SCAR”, “MARK”, or “TATTOO”. It is not used for other images. It is used to identify a general location of the captured scar, mark, tattoo, or other characteristic (including piercings) in an image. The contents of this field shall be from the NCIC code (See Annex D). The captured image may encompass an area larger than that specified by a single NCIC body part code for the particular image type. This situation may be accommodated by listing multiple NCIC codes, each in a separate information item entry. In this case the primary code is listed first. There need not be more than one subfield. For the “marks” category, the NCIC manual lists the common locations for needle track marks. For other body part locations not listed under the “marks” category, use the body location codes listed for scars.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 10
Char Types	AS
Special Chars	Blank
Value Constraints	Values from Annex D of ANSI/NIST ITL 1-2011
Look Up Codes	NCIC DESIGNATION CODES: NCIC Manual = see NCIC Code Manual version 10.3

10.041

Field Name	SMT Size (SMS)
Description	This set shall contain the dimensions of the scar, mark or tattoo. It shall consist of two information items: the height and the width. Each dimension shall be entered to the nearest centimeter.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.041_1

Field Name	*SMT Height (HGT)*
Description	The height of the scar, mark or tattoo in nearest centimeter.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	integer
Look Up Codes	n/a

10.041_2

Field Name	*SMT Width (WID)*
Description	The width of the scar, mark or tattoo in the nearest centimeter
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	integer
Look Up Codes	n/a

10.042

Field Name	**SMT Descriptors (SMD)**
Description	This set is used to describe the content of the SMT image. It shall consist of one or more subfields. Each subfield shall contain three or four information items that provide progressively detailed information describing the total image or a portion of the image.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.042_1

Field Name	*SMT Code Indicator (SMI)*
Description	This information item shall identify the source of the image as being a scar, a mark or a tattoo.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 8
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	TYPE-10 IMAGE TYPES - IMAGE SUBCODES: SCAR = healed scar tissue that was the result an accident or medical procedure MARK = the pattern resulting from needle or track marks TATTOO = a common tattoo or indelible image resulting from the pricking of the skin with a coloring matter CHEMICAL = image was created by the use of chemicals to burn the image into the skin BRANDED = image was burned into the skin using a branding iron or other form of heat CUT = image was caused by incision of the skin PIERCING = a deliberately made hole through body tissue, usually to wear body ornamentation

10.042_2

Field Name	*Tattoo Class (TAC)*
Description	This information item shall be the general class code of tattoo chosen from [possible codes below]. For each general class of tattoo, there are several defined subclasses.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 8
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	TATTOO CLASS CODES: HUMAN = Human Forms and Features ANIMAL = Animals and Animal Features PLANT = Plants FLAG = Flags OBJECT = Objects ABSTRACT = Abstractions SYMBOL = Insignias & Symbols OTHER = Other Images

10.042_3

Field Name	*Tattoo Subclass (TSC)*
Description	This information item of the subfield shall be the appropriate subclass code selected from [possible codes below] which lists the various subclasses of tattoos for each of the general classes.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 9
Char Types	A
Special Chars	None
Value Constraints	n/a
	TATTOO ABSTRACT SUBCLASS CODES: FIGURE = Figure(s) SLEEVE = Sleeve BRACE = Bracelet ANKLET = Anklet

Type-10 Facial, Other Body Part and SMT Image Record

Look Up Codes	ANKLET = Anklet NECKLC = Necklace SHIRT = Shirt BODBND = Body Band HEDBND = Head Band MABSTRACT = Miscellaneous Abstract MISC = Miscellaneous Images TATTOO ANIMAL SUBCLASS CODES: CAT = Cats & Cat Heads DOG = Dogs & Dog Heads DOMESTIC = Other Domestic Animals VICIOUS = Vicious Animals (Lions, etc.) HORSE = Horses (Donkeys, Mules, etc.) WILD = Other Wild Animals SNAKE = Snakes DRAGON = Dragons BIRD = Birds (Cardinal, Hawk, etc.) INSECT = Spiders, Bugs, and Insects ABSTRACT = Abstract Animals PARTS = Animal Parts MANIMAL = Miscellaneous Animal Forms TATTOO FLAG SUBCLASS CODES: USA = American Flag STATE = State Flag NAZI = Nazi Flag CONFED = Confederate Flag BRIT = British Flag MFLAG = Miscellaneous Flags TATTOO HUMAN SUBCLASS CODES: MFACE = Male Face FFACE = Female Face ABFACE = Abstract Face MBODY = Male Body FBODY = Female Body ABBODY = Abstract Body ROLES = Roles (Knight, Witch, man, etc.) SPORT = Sports Figures (Football Player, Skier, etc.) MBPART = Male Body Parts FBPART = Female Body Parts ABBPART = Abstract Body Parts SKULL = Skulls MHUMAN = Miscellaneous Human Forms TATTOO OBJECT SUBCLASS CODES: FIRE = Fire WEAP = Weapons(Guns, Arrows, etc.) PLANE = Airplanes VESSEL = Boats, Ships, & Other Vessels TRAIN = Trains VEHICLE = Cars, Trucks, and Vehicles MYTH = Mythical (Unicorns, etc.) SPORT = Sporting Objects (Football, Ski, Hurdles, etc.) NATURE = Water & Nature Scenes(Rivers, Sky, Trees, etc.) MOBJECTS = Miscellaneous Objects TATTOO OTHER SUBCLASS CODES: WORDING = Wording (Mom, Dad, Mary, etc.) FREEFR = Freeform Drawings MISC = Miscellaneous Images TATTOO PLANT SUBCLASS CODES: NARCOTICS = Narcotics REDFL = Red Flowers BLUEFL = Blue Flowers YELFL = Yellow Flowers DRAW = Drawings of Flowers ROSE = Rose TULIP = Tulip LILY = Lily MPLANT = Miscellaneous Plants, Flowers, Vegetables

Type-10 Facial, Other Body Part and SMT Image Record

	TATTOO SYMBOL SUBCLASS CODES: NATION = National Symbols POLITIC = Political Symbols MILITARY = Military Symbols FRATERNAL = Fraternal Symbols PROFESS = Professional Symbols GANG = Gang Symbols MSYMBOLS = Miscellaneous Symbols

10.042_4

Field Name	*Tattoo Description (TDS)*
Description	This information item in the subfield shall be an ASCII text string that provides additional qualifiers to describe the image or portion of the image. For example, to fully describe a tattoo, there may be a class description of "ANIMAL", with a subclass description of "DOG", and qualified by "golden retriever with an overbite".
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 256
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

10.043

Field Name	**Tattoo Color (COL)**
Description	This optional field shall contain one subfield corresponding to each subfield contained in Field 10.042: SMT descriptors / SMD. Each subfield shall contain up to 6 information items that list the color(s) of the tattoo or part of the tattoo. For each subfield entry, the first one shall be the predominant color chosen from the look up codes from each information item. Additional colors may be entered as optional subsequent information items of the form tattoo color code n / Tcn (n=2 through 6). There need not be more than one entry.
Remarks	n/a
Format	n/a
Num Info Items	6
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.043_1

Field Name	*Tattoo Color Code 1 (TC1)*
Description	This first information item is part of the Tattoo Color (COL) field. It lists the predominant color of the tattoo or part of the tattoo.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 7
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	COLOR NAME CODES: BLACK = Black BROWN = Brown GRAY = Gray BLUE = Blue GREEN = Green ORANGE = Orange PURPLE = Purple RED = Red YELLOW = Yellow WHITE = White MULTI = Multi-colored OUTLINE = Outlined

10.043_2

Field Name	*Tattoo Color Code 2 (TC2)*
Description	This second information item is part of the Tattoo Color (COL) field. It lists the additional color of the tattoo or part of the tattoo.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 7
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	COLOR NAME CODES: BLACK = Black BROWN = Brown GRAY = Gray BLUE = Blue GREEN = Green ORANGE = Orange PURPLE = Purple RED = Red YELLOW = Yellow WHITE = White MULTI = Multi-colored OUTLINE = Outlined

Type-10 Facial, Other Body Part and SMT Image Record

10.043_3

Field Name	*Tattoo Color Code 3 (TC3)*
Description	This third information item is part of the Tattoo Color (COL) field. It lists the additional color of the tattoo or part of the tattoo.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 7
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	COLOR NAME CODES: BLACK = Black BROWN = Brown GRAY = Gray BLUE = Blue GREEN = Green ORANGE = Orange PURPLE = Purple RED = Red YELLOW = Yellow WHITE = White MULTI = Multi-colored OUTLINE = Outlined

10.043_4

Field Name	*Tattoo Color Code 4 (TC4)*
Description	This fourth information item is part of the Tattoo Color (COL) field. It lists the additional color of the tattoo or part of the tattoo.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 7
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	COLOR NAME CODES: BLACK = Black BROWN = Brown GRAY = Gray BLUE = Blue GREEN = Green ORANGE = Orange PURPLE = Purple RED = Red YELLOW = Yellow WHITE = White MULTI = Multi-colored OUTLINE = Outlined

Type-10 Facial, Other Body Part and SMT Image Record

10.043_5

Field Name	*Tattoo Color Code 5 (TC5)*
Description	This fifth information item is part of the Tattoo Color (COL) field. It lists the additional color of the tattoo or part of the tattoo.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 7
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	COLOR NAME CODES: BLACK = Black BROWN = Brown GRAY = Gray BLUE = Blue GREEN = Green ORANGE = Orange PURPLE = Purple RED = Red YELLOW = Yellow WHITE = White MULTI = Multi-colored OUTLINE = Outlined

10.043_6

Field Name	*Tattoo Color Code 6 (TC6)*
Description	This sixth information item is part of the Tattoo Color (COL) field. It lists the additional color of the tattoo or part of the tattoo.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 7
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	COLOR NAME CODES: BLACK = Black BROWN = Brown GRAY = Gray BLUE = Blue GREEN = Green ORANGE = Orange PURPLE = Purple RED = Red YELLOW = Yellow WHITE = White MULTI = Multi-colored OUTLINE = Outlined

Type-10 Facial, Other Body Part and SMT Image Record

10.044

Field Name	Image Transform (ITX)
Description	This optional field is used in the case when the image in this Type-10 record has been transformed from the original image. The untransformed image(s) (optionally) may be included in a Type-20 record. The information item in this field may be repeated if multiple transforms were performed. It can be used for any image type specified in Field 10.003: Image type / IMT .
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 11
Char Types	A
Special Chars	None
Value Constraints	see look up codes
Look Up Codes	IMAGE TRANSFORM VALUES: AGE = Age progressed AXIS = Off-axis image rectification / Angle correction COLORSHIFT = Color shifted CONTRAST = Contrast stretched CROP = Cropped DIST = Distortion corrected (e.g. fisheye correction) DOWNSAMPLE = Down-sampled GRAY = Grayscale from color ILLUM = Illumination transform IMGFUSE = Image-level fusion of two or more images INTERPOLATE = Up-sampled MULTCOMP = Multiply compressed MULTIVIEW = Multi-view image POSE = Face-specific pose correction ROTATE = Rotated (in-plane) SNIR = Simulated Near IR SUPERRES = Super-resolution image, derived from multiple lower resolution images WHITE = White balance adjusted

10.045

Field Name	Occlusions (OCC)
Description	This optional field defines the outline and contents of any occlusions that partially or totally blocks the image of the face (IMT = 'FACE'). This is a contour or a polygon.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.045_1

Field Name	*Occlusion Opacity (OCY)*
Description	The first information item of the Occlusions (OCC) field.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	OCCLUSION OPACITY CODES: T = (Total) There is no detail in the area of the occlusion. I = (Interference) The occlusion contains interfering texture such as eyelashes, hair or reflection. L = (Partial Light) There is detail in the area of the occlusion that is lighter than the rest of the face or iris. S = (Partial Shadow) There is detail in the area of the occlusion that is darker than the rest of the face or

10.045_2

Field Name	*Occlusion Type (OCT)*
Description	The second information item of the OCCLUSIONS (OCC) field.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	OCCLUSION CODES: L = Lashes - Eyelashes or reflections of eyelashes (iris only) H = Head covering - Hair, hat, veil, burka, or other head covering (face only) S = Specular - Specularity, reflection of light C = Shadow - Shadow cast R = Reflection - Reflection of an object O = Other - Any other occlusion, such as eyeglass frames blocking the image

10.045_3

Field Name	*Number of Points (NOP)*
Description	Specifies the number of vertices.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	3 <= NOP <= 99
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.045_4

Field Name	*Horizontal Point Offset (HPO)*
Description	The pixel counts to the right.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= HPO <= HLL
Look Up Codes	n/a

10.045_5

Field Name	*Vertical Point Offset (VPO)*
Description	The pixel counts down from the origin.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= VPO <= VLL
Look Up Codes	n/a

10.200 - 10.900

Field Name	**User Defined Fields (UDF)**
Description	These are fields currently not described by the specification. Prior using these fields, coordination is required with the standard development body.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.902

Field Name	**Annotation Information (ANN)**
Description	This optional field is used to store annotation, logging, or processing information associated with one or more processing algorithms or latent workstations (other than the FBI developed ULW).
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.902_1

Field Name	*Greenwich Mean Time (GMT)*
Description	This field provides a mechanism for expressing the date and time in terms of universal Greenwich Mean Time (GMT) units. This time is independent of the actual time zone where the time and date is recorded. The data is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	n/a
Format	YYYYMMDDHHMMSSZ - for Traditional Encoding
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

10.902_2

Field Name	*Processing Algorithm Name / Version (NAV)*
Description	This field shall contain an unformatted text string of up to 64 characters identifying the name and version of the processing algorithm or workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

10.902_3

Field Name	*Algorithm Owner (OWN)*
Description	The third information item Type-9 Annotated Information field shall contain an unformatted text string of up to 64 characters with the contact information for the organization that owns the processing algorithm or latent workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.902_4

Field Name	*Process Description (PRO)*
Description	The fourth and final information item of the Type-9 Annotated Information field shall contain an unformatted text string of up to 255 characters describing a process or procedure applied to the sample in this Type-XX record.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 255
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

10.903

Field Name	**Device Unique Identifier (DUI)**
Description	The DUI shall contain a string uniquely identifying the device or source of the data. This field shall be one of: • Host PC MAC address, identified by the first character “M”, or • Host PC processor ID, identified by the first character “P”.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	13 to 16
Char Types	ANS
Special Chars	Any
Value Constraints	first character = M or P
Look Up Codes	n/a

10.904

Field Name	**Make/Model/Serial Number (MMS)**
Description	The MMS contains the make, model and serial number for the capture device. It shall consist of three information items. Each information item shall be 1 to 50 characters. Any or all information items may indicate that information is unknown with the value “0”.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.904_1

Field Name	*Make (MAK)*
Description	The name of the manufacturer for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

10.904_2

Field Name	*Model (MOD)*
Description	The model number for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

10.904_3

Field Name	*Serial Number (SER)*
Description	The serial number for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

10.993

Field Name	**Source Agency Name (SAN)**
Description	This is an optional field. It may contain up to 125 Unicode characters. It is the name of the agency referenced in Field xx.004: Source agency / SRC for record types 9-99.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 125
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.995

Field Name	Associated Context (ASC)
Description	Optional field xx.995 is contained in biometric data sample Record Types 10 and above that may have instances of Record Type-21 linked to it. Record Type-21 stores images and/or recordings that are not the actual source of the biometric data contained in another Record Type, but do show the context of the biometric data. An example would be a photograph of a glass that had latent prints on it. The actual image of the latent prints would appear in a Type-20 record, with the segmented individual images appearing in Type-13 records. This field consists of a maximum of 255 repeating subfields, each of which contains two information items, as described below. This is because there may be multiple instances of associated context records associated with a single biometric sample.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.995_1

Field Name	*Associated Context Number (ACN)*
Description	The first information item for the Associated Context field for a particular Record Type-21. This is mandatory for each Field xx.995, when the field is used. It contains an index to a particular instance of a Type-21 record in the transaction. This same index value appears in the appropriate instance of Record Type-21 as Field 21.021: Associated context number / ACN. The value of the ACN shall be a sequentially assigned a positive integer starting from one and incremented by one, not toexceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= ACN <= 255; positive integer
Look Up Codes	n/a

10.995_2

Field Name	*Associated Segment Position (ASP)*
Description	The first information item is the associated segment position / ASP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= ASP <= 99; positive integer
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.996

Field Name	Hash (HAS)
Description	Optional field xx.996, is designed for use in Record types 10 and above with a Field xx.999 storing the biometric data. It is comprised of 64 characters representing hexadecimal values. Thus, each character may be a digit from “0” to “9” or a letter “A” through “F”. See the latest version of the Federal Information Processing Standard 180, Secure Hash Standard for information on computing SHA-256 hashes. At the time of this standard’s publication, FIPS 180-37 had been published. It is also possible to use Field xx.996 to contain the hash for data stored externally, which is referenced in Field 20.994: External file reference / EFR and /or Field 21.994: External file reference / EFR . The ability to store files externally is new to this version of the standard, and is only implemented for the two new record types referred to here. Use of the hash enables the receiver of the data to perform quick searches of large databases to determine if the data already exist in the database. It is not intended as an information assurance check.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	64 to 64
Char Types	H
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

10.997

Field Name	Source Representation (SOR)
Description	This optional field xx.997 is allowed in biometric data sample Record Types 10 and above that could have the biometric sample derived from a source representation in Record Type-20. The biometric data is stored in Field xx.999.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.997_1

Field Name	*Source Representation Number (SRN)*
Description	This is the first information item and is mandatory for each Field xx.997. It contains an index to a particular instance of a Type-20 record in the transaction. This same index value appears in the appropriate instance of Record Type-20 as Field 20.021: Source representation number / SRN. The value of the SRN shall be a sequentially assigned a positive integer starting from one and incremented by one, not to exceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= SRN <= 255; positive integer
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.997_2

Field Name	*Reference Segment Position (RSP)*
Description	The first information item is the reference segment position / RSP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= RSP <= 99; positive integer
Look Up Codes	n/a

10.998

Field Name	**Geographic Sample Acquisition Location (GEO)**
Description	This field contains the location where the sample/original source/context information was acquired – not where it is stored.
Remarks	n/a
Format	n/a
Num Info Items	15
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

10.998_01

Field Name	*Universal Time Entry (UTE)*
Description	The coordinated universal time (UTC) where the biometric sample was collected. This time is independent of the actual time zone where the time and date is recorded. The date is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	If sample collection time is unknown, set it to "00000000000000Z."
Format	n/a
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.998_02

Field Name	*Latitude Degree Value (LTD)*
Description	The second information item is latitude degree value / LTD. This is a value that specifies the degree of latitude. The value shall be between -90 (inclusive) and +90 (inclusive). The degrees may be expressed as an integer (without a decimal) or a real number including decimals. If decimals are present, then minutes and seconds shall be empty. Examples: Buenos Aires, Argentina: -34 (with minutes LTM = 36) NIST, Gaithersburg, Maryland: 39.137627 (no LTM or LTS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 9
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-90 <= LTD <= 90
Look Up Codes	n/a

10.998_03

Field Name	*Latitude Minute Value (LTM)*
Description	The third information item is latitude minute value / LTM. This is a value that specifies a minute of a degree. The value shall be between 0 (inclusive) to 60 (exclusive). The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall be empty. The minute value is empty, even if the degree value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTM < 60
Look Up Codes	n/a

10.998_04

Field Name	*Latitude Second Value (LTS)*
Description	The fourth information item is the latitude second value / LTS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTS < 60
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.998_05

Field Name	*Longitude Degree Value (LGD)*
Description	The fifth information item is the longitude degree value / LGD. It is a value that specifies the degree of a longitude. The value shall be between -180 (inclusive) and +180 (inclusive). If LTD is present, then LGD shall be present.The degrees may be expressed as whole numbers (without a decimal) or real numbers including decimals. If decimals are present, then minutes and seconds are empty. Examples: Buenos Aires, Argentina: -58 (with minutes LGM = 22) NIST, Gaithersburg, Maryland: -77.216032 (no LGM or LGS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-180 <= LGD <= 180
Look Up Codes	n/a

10.998_06

Field Name	*Longitude Minute Value (LGM)*
Description	The sixth information item is the longitude minute value / LGM. It is a value that specifies a minute of a degree. The value shall be from 0 (inclusive) to 60 (exclusive).The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall not appear. The minute value is empty, even if the degree value is an integer. If LTM is present, then LGM shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGM < 60
Look Up Codes	n/a

10.998_07

Field Name	*Longitude Second Value (LGS)*
Description	The seventh information item is the longitude second value / LGS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer. If LTS is present, then LGS shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGS < 60
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.998_08

Field Name	*Elevation (ELE)*
Description	
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Minus Sign,Period
Value Constraints	-422.000 < ELE < 8848.000; real number
Look Up Codes	n/a

10.998_09

Field Name	*Geodetic Datum Code (GDC)*
Description	The ninth information item is the geodetic datum code / GDC11. It is an alphanumeric value of 3 to 6 characters in length. This information item is used to indicate which coordinate system was used to represent the values in information items 2 through 7. If no entry is made in this information item, then the basis for the values entered in the first eight information items shall be WGS84, the code for the World Geodetic Survey 1984 version - WGS 84 (G873). See look up codes for values.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 6
Char Types	AN
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	GEOGRAPHIC COORDINATE DATUM CODES: AIRY = Airy AUST = Australian National BES = Bessel 1841 BESN = Bessel 1841 (Nambia) CLK66 = Clarke 1866 CLK80 = Clarke 1880 EVER = Everest FIS60 = Fischer 1960 (Mercury) FIS68 = Fischer 1968 GRS67 = GRS 1967 GRS80 = GRS 1980 HELM = Helmert 1906 HOUG = Hough INT = International KRAS = Krassovsky AIRYM = Modified Airy EVERM = Modified Everest FIS60M = Modified Fischer 1960 SA69 = South American 1969 WGS60 = WGS-60 WGS66 = WGS-66 WGS72 = WGS-72 WGS84 = WGS-84 / NAD-83 Other = <entry up to 6 characters>

Type-10 Facial, Other Body Part and SMT Image Record

10.998_10

Field Name	*Geographic Coordinate Universal Transverse Mercator Zone (GCM)*
Description	It is an alphanumeric value of 2 to 3 characters. This is a one or two digit UTM zone number followed by the 8 degree latitudinal band designator (which is a single letter).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	AN
Special Chars	None
Value Constraints	One or two integers followed by a single letter
Look Up Codes	n/a

10.998_11

Field Name	*Geographic Coordinate Universal Transverse Mercator Easting (GCE)*
Description	The eleventh information item is the geographic coordinate universal transverse Mercator easting / GCE. It is an integer of 1 to 6 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 6
Char Types	N
Special Chars	None
Value Constraints	integer
Look Up Codes	n/a

10.998_12

Field Name	*Geographic Coordinate Universal Transverse Mercator Northing (GCN)*
Description	The twelfth information item is the geographic coordinate universal transverse Mercator northing / GCN. It is an integer of 1 to 8 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	N
Special Chars	None
Value Constraints	integer
Look Up Codes	n/a

10.998_13

Field Name	*Geographic Reference Text (GRT)*
Description	It is a free form text describing a street address or other physical location (such as ‘Corner of Washington and Madison, Geneva, NY’).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 150
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.998_14

Field Name	*Geographic Coordinate Other System Identifier (OSI)*
Description	A fourteenth optional information item geographic coordinate other system identifier / OSI allows for other coordinate systems. This information items specifies the system identifier. It is up to 10 characters in length. Examples are: • MGRS (Military Grid Reference System) • USNG (United States National Grid) • GARS (Global Area Reference System) • GEOREF (World Geographic Reference) • LANDMARK landmark (e.g. hydant) and position relative to the landmark.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

10.998_15

Field Name	*Geographic Coordinate Other System Value (OCV)*
Description	A fifteenth optional information item, is the geographic coordinate other system value / OCV. It shall only be present if OSI is present in the record. It can be up to 126 characters in length. If OSI is LANDMARK, OCV is free text and may be up to 126 characters. For details on the formatting of OCV for the other coordinate systems shown in OSI as examples, see http://earth-info.nga.mil/GandG/coordsys/grids/referencesys.html .
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

10.999

Field Name	**Body Part Image (DATA)**
Description	This mandatory field contains the image.
Remarks	See Section 7.2 of ANSI/NIST ITL 1-2011 for details.
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	B
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

Type-10 Facial, Other Body Part and SMT Image Record

10.XXX

Field Name	Reserved for Future Use only by ANSI/NIST-ITL ()
Description	These Field IDs listed are reserved for future version of ANSI/NIST ITL use. These Field IDs are not for local use.
Remarks	10.034-10.037, 10.046-10.199, 10.901, 10.905-10.992, 10.994
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.001

Field Name	Record Header (LEN - for Traditional Encoding only)
Description	The record header appears as the first field (xx.001) in each Record Type. It contains information particular to the encoding format chosen, in order to enable proper reading of the record. In Traditional encoding, this field contains the record length in bytes (including all information separators). In NIEM-conformant XML encoding, this field contains the RecordCategoryCode, which is the numeric representation of the Record Type.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	N
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

13.002

Field Name	Information Designation Character (IDC)
Description	Each of the records present in a transaction, with the exception of the Type-1 record, shall include a field (xx.002) containing the information designation character / IDC. The value of the IDC shall be a sequentially assigned positive integer starting from zero and incremented by one up to a maximum of 99. IDC references are stated in Type-1 Field 1.003 Transaction content / CNT and shall be used to relate information items in the CNT field of the Type-1 record to the other records in the transaction. Two or more records may share a single IDC solely to identify and link together records that pertain to different representations of the same biometric trait.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= IDC <= 99; integer
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.003

Field Name	Impression Type (IMP)
Description	This mandatory field shall indicate the manner by which the friction ridge print was obtained.
Remarks	NATO STANAG 4715 Edition 1 currently supports only Latent Fingerprint.
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	4 <= IMP <= 7 or IMP = 28 or 29; or 36 <= IMP <= 39; integer; also see Look Up Codes
Look Up Codes	FRICTION RIDGE IMPRESSION CODES: 0 = Livescan (type unknown or unspecified) - Fingerprint Plain 1 = Livescan (type unknown or unspecified) - Fingerprint Rolled 2 = Non-livescan (e.g. inked) - Fingerprint Plain 3 = Non-livescan (e.g. inked) - Fingerprint Rolled 4 = Latent Impression - Fingerprint 5 = Latent Tracing - Fingerprint 6 = Latent Photo - Fingerprint 7 = Latent Lift - Fingerprint 8 = Livescan Vertical Swipe - Fingerprint Plain 10 = Livescan (type unknown or unspecified) - Palm 11 = Non-livescan (e.g. inked) - Palm 12 = Latent Impression - Palm 13 = Latent Tracing - Palm 14 = Latent Photo - Palm 15 = Latent Lift - Palm 20 = Livescan Optical Contact - Fingerprint Plain 21 = Livescan Optical Contact - Fingerprint Rolled 22 = Livescan Non-Optical Contact - Fingerprint Plain 23 = Livescan Non-Optical Contact - Fingerprint Rolled 24 = Livescan Optical Contactless - Fingerprint Plain 25 = Livescan Optical Contactless - Fingerprint Rolled 26 = Livescan Non-Optical Contactless - Fingerprint Plain 27 = Livescan Non-Optical Contactless - Fingerprint Rolled 28 = Other 29 = Unknown 30 = Live-scan plantar 31 = Nonlive-scan plantar 32 = Latent impression plantar 33 = Latent tracing plantar 34 = Latent photo plantar 35 = Latent lift plantar 36 = Latent impression unknown friction-ridge 37 = Latent tracing unknown friction-ridge 38 = Latent photo unknown friction-ridge 39 = Latent lift unknown friction-ridge

13.004

Field Name	Source Agency (SRC)
Description	This is the identifier of the agency that actually created the record and supplied the information contained in it.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.005

Field Name	Latent Capture Date (LCD)
Description	This mandatory field shall contain the date that the latent biometric data contained in the record was captured.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

13.006

Field Name	Horizontal Line Length (HLL)
Description	HLL defines the number of pixels contained on a single horizontal line of the image. The maximum horizontal size is limited to 65,535 pixels in Record Types-4 and 8, and to 99,999 for other record types. The minimum value is 10 pixels. The total image size (HLL times VLL) must be able to be accommodated in Field xx.001 for Traditional encoding.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 5
Char Types	N
Special Chars	None
Value Constraints	10 <= HLL <= 99999; positive integer
Look Up Codes	n/a

13.007

Field Name	Vertical Line Length (VLL)
Description	VLL defines the number of horizontal lines contained in the image. The maximum vertical size is limited to 65,535 pixels in Record Types-4 and 8, and to 99,999 for other record types. The minimum value is 10 pixels.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 5
Char Types	N
Special Chars	None
Value Constraints	10 <= VLL <= 99999; positive integer
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.008

Field Name	Scale Units (SLC)
Description	The image sampling frequency (pixel density). A value of “1” shall indicate pixels per inch. A value of “2” shall indicate pixels per centimeter. A value of “0” in this field indicates that no scale is provided, and the quotient of THPS/TVPS shall provide the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	SLC = 0, 1 or 2
Look Up Codes	SCALE UNIT CODES: 1 = Pixels Per Inch 2 = Pixels Per Centimeter 0 = No Scale

13.009

Field Name	Transmitted Horizontal Pixel Scale (THPS)
Description	This is the integer pixel density used in the horizontal direction of the image if SLC has a value of “1” or “2”. If SLC has a value of “0”, this information item shall contain the horizontal component of the pixel aspect ratio, up to 5 integer digits. For example, if the SLC value = 1, then the value of THPS could be ‘1000’ for a 1000 ppi sensor.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	integer
Look Up Codes	n/a

13.010

Field Name	Transmitted Vertical Pixel Scale (TVPS)
Description	This is the integer pixel density used in the vertical direction of the image if SLC has a value of “1” or “2”. If SLC has a value of “0”, this information item shall contain the vertical component of the pixel aspect ratio, up to 5 integer digits. If SLC is 1 or 2, then TVPS shall equal THPS.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	integer
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.011

Field Name	Compression Algorithm (CGA)
Description	This is a mandatory field. It shall specify the algorithm used to compress the transmitted color or grayscale images.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 5
Char Types	AN
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	IMAGE COMPRESSION ALGORITHM CODES: NONE = Uncompressed WSQ20 = WSQ Version 2.0 JPEGB = JPEG ISO/IEC 10918 (Lossy) JPEGL = JPEG ISO/IEC 10918 (Lossless) JP2 = JPEG 2000 ISO/IEC 15444-1 (Lossy) JP2L = JPEG 2000 ISO/IEC 15444-1 (Lossless) PNG = Portable Network Graphics

13.012

Field Name	Bits Per Pixel (BPX)
Description	This ASCII field shall contain the number of bits used to represent a pixel. This field shall contain an entry of “8” for normal grayscale values of “0” to “255” or each RGB color component. Any entry in this field greater than “8” shall represent a grayscale or color pixel component with increased precision.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.013

Field Name	Friction Ridge Generalized Position
Description	This field is used in Record types dealing with friction ridges. It specifies which friction ridge biometric sample was collected. Codes 33 and 36 are included for the rolled hypothenar (even though they are palm codes), since it is considered as part of the extended fingerprint set.
Remarks	NATO STANAG 4715 Edition 1 currently supports only Latent Fingerprint.
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= FGP <= 19 or 40 <= FGP <= 50
Look Up Codes	2-FINGER COMBINATIONS: 40 = Right index/middle 41 = Right Middle/Ring 42 = Right Ring/Little 43 = Left Index/Middle 44 = Left Middle/Ring 45 = Left Ring/Little 46 = Right index/ Left index 3-FINGER COMBINATIONS: 47 = Right Index/Middle/Ring 48 = Right Middle/Ring/Little 49 = Left Index/Middle/Ring 50 = Left Middle/Ring/Little ADDITIONAL CODE FOR EXTENDED FINGERPRINT SET: 33 = Right Hypothenar 36 = Left Hypothenar FRICTION RIDGE POSITION CODE - FINGER POSITION: 0 = Unknown Finger 1 = Right Thumb 2 = Right Index Finger 3 = Right Middle Finger 4 = Right Ring Finger 5 = Right Little Finger 6 = Left Thumb 7 = Left Index Finger 8 = Left Middle Finger 9 = Left Ring Finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs 16 = Right extra digit 17 = Left extra digit 18 = Unknown friction ridge 19 = EJI or tip

Type-13 Variable-Resolution Latent Image Record

13.014

Field Name	Search Position Descriptors (SPD)
Description	Shall be present if and only if the finger position code "19" appears in Field [Finger/Palm Position]. It is used to narrow the search of the latent image in this record against a database.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

13.014_1

Field Name	*Probable Decimal Finger Position Code (PDF)*
Description	The first information item of the Search Position Descriptors (SPD) field taken from Look Up Codes below, with integers 0 through 10, 16 or 17 allowed.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= PDF <= 10, or PDF = 16 or 17

Type-13 Variable-Resolution Latent Image Record

Look Up Codes	FRICTION RIDGE POSITION CODE - FINGER POSITION: 0 = Unknown Finger 1 = Right Thumb 2 = Right Index Finger 3 = Right Middle Finger 4 = Right Ring Finger 5 = Right Little Finger 6 = Left Thumb 7 = Left Index Finger 8 = Left Middle Finger 9 = Left Ring Finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs 16 = Right extra digit 17 = Left extra digit 18 = Unknown friction ridge 19 = EJI or tip FRICTION RIDGE POSITION CODE - PALM POSITION: 20 = Unknown Palm 21 = Right Full Palm 22 = Right Writer's Palm 23 = Left Full Palm 24 = Left Writer's Palm 25 = Right Lower Palm 26 = Right Upper Palm 27 = Left Lower Palm 28 = Left Upper Palm 29 = Right Other 30 = Left Other 31 = Right Interdigital 32 = Right Thenar 33 = Right Hypothenar 34 = Left Interdigital 35 = Left Thenar 36 = Left Hypothenar 37 = Right grasp 38 = Left grasp 81 = Right carpal delta area 82 = Left carpal delta area 83 = Right full palm, including writer's palm 84 = Left full palm, including writer's palm FRICTION RIDGE POSITION CODE - PLANTAR POSITION: 60 = Unknown sole 61 = Sole - right foot 62 = Sole - left foot 63 = Unknown toe 64 = Right big toe 65 = Right second toe 66 = Right middle toe 67 = Right fourth toe 68 = Right little toe 69 = Left big toe 70 = Left second toe 71 = Left middle toe 72 = Left fourth toe 73 = Left little toe 74 = Front / ball of right foot 75 = Back / heel of right foot 76 = Front / ball of left foot 77 = Back / heel of left foot 78 = Right arch of foot 79 = Left arch of foot

Type-13 Variable-Resolution Latent Image Record

13.014_2

Field Name	*Finger Image Code (FIC)*
Description	The second information item of the Search Position Descriptors (SPD) field to indicate the portion of the database to search. Full-length finger joint images use codes FV1 through FV4. Figure 2 is an illustration of the Entire Joint Image for a middle finger with each of the full finger views and constituent parts identified. Multiple portions of the EJI may be listed in a separate subfield.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	AN
Special Chars	None
Value Constraints	EJI, TIP, FV1, FV2, FV3, FV4, PRX, DST or MED
Look Up Codes	JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - FIC ONLY: EJI = Entire Joint Image JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - FVC ONLY: NA = Only a proximal, distal or medial segment is available JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - FVC OR FIC: TIP = Rolled Tip FV1 = Full Finger Rolled Image FV2 = Full Finger Plain Image – left side FV3 = Full Finger Plain Image – center FV4 = Full Finger Plain Image – right side JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - LOS ONLY: NA = Image portion refers to a full finger view, tip or to the entire joint image locations JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - LOS OR FIC: PRX = Proximal DST = Distal Segment MED = Medial Segment

13.015

Field Name	**Print Position Coordinates (PPC)**
Description	Describe the type or portion of the latent image contained in this record and its location within an entire joint image. If finger position code “19” appears in Finger Position field, this set contains offsets to the locations for the bounding box of the EJI, each of the full finger views, or segments within the EJI. This set consists of 6 information items: full finger view, segment location, horizontal offset left and right, and vertical offset top and bottom. For the case of a fingertip, the first information item shall be “TIP”, and the second information item shall be “NA”. The next four information items are the horizontal and vertical offsets as defined above. The six information items will describe either the location of the entire joint image, one full finger view, or segment.
Remarks	n/a
Format	n/a
Num Info Items	6
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.015_1

Field Name	*Full Finger View (FVC)*
Description	This information item is the number of the full finger view with values of "FV1" through "FV4". Values of “FV1” to “FV4” specify the bounding coordinates for each full finger view. For the case of a fingertip, this information item shall be “TIP”. FVC will contain the code “NA” if only a proximal, distal or medial segment is available.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	AN
Special Chars	None
Value Constraints	FVC = NA, TIP, FV1, FV2, FV3 or FV4; see Look Up Codes
Look Up Codes	JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - FVC ONLY: NA = Only a proximal, distal or medial segment is available JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - FVC OR FIC: TIP = Rolled Tip FV1 = Full Finger Rolled Image FV2 = Full Finger Plain Image – left side FV3 = Full Finger Plain Image – center FV4 = Full Finger Plain Image – right side

13.015_2

Field Name	*Location of Segment (LOS)*
Description	This information item is used to identify the location of a segment within a full finger view. It will contain the not applicable code “NA” if the image portion refers to a full finger view or to the entire joint image locations. It shall contain “PRX”, “DST”, “MED” for a proximal, distal, or medial segment.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	A
Special Chars	None
Value Constraints	LOS = NA, PRX, DST or MED; see Look Up Codes
Look Up Codes	JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - LOS ONLY: NA = Image portion refers to a full finger view, tip or to the entire joint image locations JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - LOS OR FIC: PRX = Proximal DST = Distal Segment MED = Medial Segment

13.015_3

Field Name	*Left Horizontal Coordinate (LHC)*
Description	It is the horizontal offset in pixels to the left edge of the bounding box relative to the origin positioned in the upper left corner of the image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= LHC <= HLL; positive integer
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.015_4

Field Name	*Right Horizontal Coordinate (RHC)*
Description	It is the horizontal offset in pixels to the right edge of the bounding box relative to the origin positioned in the upper left corner of the image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	LHC <= RHC <= HLL; positive integer
Look Up Codes	n/a

13.015_5

Field Name	*Top Vertical Coordinate (TVC)*
Description	The vertical offset (pixel counts down) to the top of the bounding box.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= TVC <= VLL; positive integer
Look Up Codes	n/a

13.015_6

Field Name	*Bottom Vertical Coordinate (BVC)*
Description	It is the vertical offset from the upper left corner of the image down to the bottom of the bounding box. It is counted in pixels.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	TVC <= BVC <= VLL; positive integer
Look Up Codes	n/a

13.016

Field Name	**Scanned Horizontal Pixel Scale (SHPS)**
Description	This ASCII field shall specify the horizontal pixel density used for scanning providing the SLC field contains a "1" or a "2". Otherwise, it indicates the horizontal component of the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.017

Field Name	Scanned Vertical Pixel Scale (SVPS)
Description	This ASCII field shall specify the vertical pixel density used for scanning providing the SLC field contains a "1" or a "2". Otherwise, it indicates the vertical component of the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

13.020

Field Name	Comment (COM)
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

13.024

Field Name	Latent Quality Metric (LQM)
Description	This ASCII set is used to specify one or more different metrics of latent image quality score data for the image stored in this record. The meaning attributed to this metric must be defined and interpreted by the producer of the scoring algorithm or by the person or system used to assign the metric to the latent image. The metric may be a predictor of AFIS matcher accuracy performance or a different metric to indicate a value associated with the quality of the latent image for a particular function. This field may contain one or more subfields.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.024_1

Field Name	*Friction Ridge Metric Position*
Description	The first information item of a quality metric field indicating the friction ridge position. Codes 33 and 36 are included for the rolled hypothenar (even though they are palm codes), since it is considered as part of the extended fingerprint set.
Remarks	
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	FRICTION RIDGE POSITION CODE - FINGER POSITION: 0 = Unknown Finger 1 = Right Thumb 2 = Right Index Finger 3 = Right Middle Finger 4 = Right Ring Finger 5 = Right Little Finger 6 = Left Thumb 7 = Left Index Finger 8 = Left Middle Finger 9 = Left Ring Finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs 16 = Right extra digit 17 = Left extra digit 18 = Unknown friction ridge 19 = EJI or tip

13.024_2

Field Name	*Quality Value (QVU)*
Description	This information item shall contain the integer image quality score between 0 and 100 (inclusive) assigned to the image data by a quality algorithm. Higher values indicate better quality. An entry of “255” shall indicate a failed attempt to calculate a quality score. An entry of “254” shall indicate that no attempt to calculate a quality score was made.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	0 <= QVU <= 100 or QVU = 254 or 255; integer
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.024_3

Field Name	*Algorithm Vendor Identification (QAV)*
Description	This information item shall specify the ID of the vendor of the quality algorithm used to calculate the quality score. This 4-digit hex value is assigned by IBIA and expressed as four ASCII characters. The IBIA shall maintain the Vendor Registry of CBEFF Biometric Organizations that will map the value in this field to a registered organization.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 4
Char Types	H
Special Chars	None
Value Constraints	0000 <= QAV <= FFFF
Look Up Codes	n/a

13.024_4

Field Name	*Algorithm Product Identification (QAP)*
Description	This information item shall specify a numeric product code assigned by the vendor of the quality algorithm, which may be registered with the IBIA, but it is not required to be registered. It indicates which of the vendor's algorithms was used in the calculation of the quality score. This field contains the ASCII representation of the integer product code and should be within the range 1 to 65535.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= QAP <= 65535; positive integer
Look Up Codes	n/a

13.200 - 13.900

Field Name	**User Defined Fields (UDF)**
Description	These are fields currently not described by the specification. Prior using these fields, coordination is required with the standard development body.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.902

Field Name	Annotation Information (ANN)
Description	This optional field is used to store annotation, logging, or processing information associated with one or more processing algorithms or latent workstations (other than the FBI developed ULW).
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

13.902_1

Field Name	*Greenwich Mean Time (GMT)*
Description	This field provides a mechanism for expressing the date and time in terms of universal Greenwich Mean Time (GMT) units. This time is independent of the actual time zone where the time and date is recorded. The data is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	n/a
Format	YYYYMMDDHHMMSSZ - for Traditional Encoding
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

13.902_2

Field Name	*Processing Algorithm Name / Version (NAV)*
Description	This field shall contain an unformatted text string of up to 64 characters identifying the name and version of the processing algorithm or workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.902_3

Field Name	*Algorithm Owner (OWN)*
Description	The third information item Type-9 Annotated Information field shall contain an unformatted text string of up to 64 characters with the contact information for the organization that owns the processing algorithm or latent workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

13.902_4

Field Name	*Process Description (PRO)*
Description	The fourth and final information item of the Type-9 Annotated Information field shall contain an unformatted text string of up to 255 characters describing a process or procedure applied to the sample in this Type-XX record.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 255
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

13.903

Field Name	**Device Unique Identifier (DUI)**
Description	The DUI shall contain a string uniquely identifying the device or source of the data. This field shall be one of: • Host PC MAC address, identified by the first character “M”, or • Host PC processor ID, identified by the first character “P”.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	13 to 16
Char Types	ANS
Special Chars	Any
Value Constraints	first character = M or P
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.904

Field Name	Make/Model/Serial Number (MMS)
Description	The MMS contains the make, model and serial number for the capture device. It shall consist of three information items. Each information item shall be 1 to 50 characters. Any or all information items may indicate that information is unknown with the value “0”.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

13.904_1

Field Name	*Make (MAK)*
Description	The name of the manufacturer for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

13.904_2

Field Name	*Model (MOD)*
Description	The model number for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

13.904_3

Field Name	*Serial Number (SER)*
Description	The serial number for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.993

Field Name	Source Agency Name (SAN)
Description	This is an optional field. It may contain up to 125 Unicode characters. It is the name of the agency referenced in Field xx.004: Source agency / SRC for record types 9-99.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 125
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

13.995

Field Name	Associated Context (ASC)
Description	Optional field xx.995 is contained in biometric data sample Record Types 10 and above that may have instances of Record Type-21 linked to it. Record Type-21 stores images and/or recordings that are not the actual source of the biometric data contained in another Record Type, but do show the context of the biometric data. An example would be a photograph of a glass that had latent prints on it. The actual image of the latent prints would appear in a Type-20 record, with the segmented individual images appearing in Type-13 records. This field consists of a maximum of 255 repeating subfields, each of which contains two information items, as described below. This is because there may be multiple instances of associated context records associated with a single biometric sample.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

13.995_1

Field Name	*Associated Context Number (ACN)*
Description	The first information item for the Associated Context field for a particular Record Type-21. This is mandatory for each Field xx.995, when the field is used. It contains an index to a particular instance of a Type-21 record in the transaction. This same index value appears in the appropriate instance of Record Type-21 as Field 21.021: Associated context number / ACN. The value of the ACN shall be a sequentially assigned a positive integer starting from one and incremented by one, not toexceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= ACN <= 255; positive integer
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.995_2

Field Name	*Associated Segment Position (ASP)*
Description	The first information item is the associated segment position / ASP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= ASP <= 99; positive integer
Look Up Codes	n/a

13.996

Field Name	**Hash (HAS)**
Description	Optional field xx.996, is designed for use in Record types 10 and above with a Field xx.999 storing the biometric data. It is comprised of 64 characters representing hexadecimal values. Thus, each character may be a digit from “0” to “9” or a letter “A” through “F”. See the latest version of the Federal Information Processing Standard 180, Secure Hash Standard for information on computing SHA-256 hashes. At the time of this standard’s publication, FIPS 180-37 had been published. It is also possible to use Field xx.996 to contain the hash for data stored externally, which is referenced in Field 20.994: External file reference / EFR and /or Field 21.994: External file reference / EFR . The ability to store files externally is new to this version of the standard, and is only implemented for the two new record types referred to here. Use of the hash enables the receiver of the data to perform quick searches of large databases to determine if the data already exist in the database. It is not intended as an information assurance check.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	64 to 64
Char Types	H
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

13.997

Field Name	**Source Representation (SOR)**
Description	This optional field xx.997 is allowed in biometric data sample Record Types 10 and above that could have the biometric sample derived from a source representation in Record Type-20. The biometric data is stored in Field xx.999.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.997_1

Field Name	*Source Representation Number (SRN)*
Description	This is the first information item and is mandatory for each Field xx.997. It contains an index to a particular instance of a Type-20 record in the transaction. This same index value appears in the appropriate instance of Record Type-20 as Field 20.021: Source representation number / SRN. The value of the SRN shall be a sequentially assigned a positive integer starting from one and incremented by one, not to exceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= SRN <= 255; positive integer
Look Up Codes	n/a

13.997_2

Field Name	*Reference Segment Position (RSP)*
Description	The first information item is the reference segment position / RSP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= RSP <= 99; positive integer
Look Up Codes	n/a

13.998

Field Name	**Geographic Sample Acquisition Location (GEO)**
Description	This field contains the location where the sample/original source/context information was acquired – not where it is stored.
Remarks	n/a
Format	n/a
Num Info Items	15
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.998_01

Field Name	*Universal Time Entry (UTE)*
Description	The coordinated universal time (UTC) where the biometric sample was collected. This time is independent of the actual time zone where the time and date is recorded. The date is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	If sample collection time is unknown, set it to "00000000000000Z."
Format	n/a
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

13.998_02

Field Name	*Latitude Degree Value (LTD)*
Description	The second information item is latitude degree value / LTD. This is a value that specifies the degree of latitude. The value shall be between -90 (inclusive) and +90 (inclusive). The degrees may be expressed as an integer (without a decimal) or a real number including decimals. If decimals are present, then minutes and seconds shall be empty. Examples: Buenos Aires, Argentina: -34 (with minutes LTM = 36) NIST, Gaithersburg, Maryland: 39.137627 (no LTM or LTS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 9
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-90 <= LTD <= 90
Look Up Codes	n/a

13.998_03

Field Name	*Latitude Minute Value (LTM)*
Description	The third information item is latitude minute value / LTM. This is a value that specifies a minute of a degree. The value shall be between 0 (inclusive) to 60 (exclusive). The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall be empty. The minute value is empty, even if the degree value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTM < 60
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.998_04

Field Name	*Latitude Second Value (LTS)*
Description	The fourth information item is the latitude second value / LTS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTS < 60
Look Up Codes	n/a

13.998_05

Field Name	*Longitude Degree Value (LGD)*
Description	The fifth information item is the longitude degree value / LGD. It is a value that specifies the degree of a longitude. The value shall be between -180 (inclusive) and +180 (inclusive). If LTD is present, then LGD shall be present.The degrees may be expressed as whole numbers (without a decimal) or real numbers including decimals. If decimals are present, then minutes and seconds are empty. Examples: Buenos Aires, Argentina: -58 (with minutes LGM = 22) NIST, Gaithersburg, Maryland: -77.216032 (no LGM or LGS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-180 <= LGD <= 180
Look Up Codes	n/a

13.998_06

Field Name	*Longitude Minute Value (LGM)*
Description	The sixth information item is the longitude minute value / LGM. It is a value that specifies a minute of a degree. The value shall be from 0 (inclusive) to 60 (exclusive).The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall not appear. The minute value is empty, even if the degree value is an integer. If LTM is present, then LGM shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGM < 60
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.998_07

Field Name	*Longitude Second Value (LGS)*
Description	The seventh information item is the longitude second value / LGS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer. If LTS is present, then LGS shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGS < 60
Look Up Codes	n/a

13.998_08

Field Name	*Elevation (ELE)*
Description	
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Minus Sign,Period
Value Constraints	-422.000 < ELE < 8848.000; real number
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.998_09

Field Name	*Geodetic Datum Code (GDC)*
Description	The ninth information item is the geodetic datum code / GDC11. It is an alphanumeric value of 3 to 6 characters in length. This information item is used to indicate which coordinate system was used to represent the values in information items 2 through 7. If no entry is made in this information item, then the basis for the values entered in the first eight information items shall be WGS84, the code for the World Geodetic Survey 1984 version - WGS 84 (G873). See look up codes for values.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 6
Char Types	AN
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	GEOGRAPHIC COORDINATE DATUM CODES: AIRY = Airy AUST = Australian National BES = Bessel 1841 BESN = Bessel 1841 (Nambia) CLK66 = Clarke 1866 CLK80 = Clarke 1880 EVER = Everest FIS60 = Fischer 1960 (Mercury) FIS68 = Fischer 1968 GRS67 = GRS 1967 GRS80 = GRS 1980 HELM = Helmert 1906 HOUG = Hough INT = International KRAS = Krassovsky AIRYM = Modified Airy EVERM = Modified Everest FIS60M = Modified Fischer 1960 SA69 = South American 1969 WGS60 = WGS-60 WGS66 = WGS-66 WGS72 = WGS-72 WGS84 = WGS-84 / NAD-83 Other = <entry up to 6 characters>

13.998_10

Field Name	*Geographic Coordinate Universal Transverse Mercator Zone (GCM)*
Description	It is an alphanumeric value of 2 to 3 characters. This is a one or two digit UTM zone number followed by the 8 degree latitudinal band designator (which is a single letter).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	AN
Special Chars	None
Value Constraints	One or two digit UTM zone
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.998_11

Field Name	*Geographic Coordinate Universal Transverse Mercator Easting (GCE)*
Description	The eleventh information item is the geographic coordinate universal transverse Mercator easting / GCE. It is an integer of 1 to 6 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 6
Char Types	N
Special Chars	None
Value Constraints	0 <= GCE; integer
Look Up Codes	n/a

13.998_12

Field Name	*Geographic Coordinate Universal Transverse Mercator Northing (GCN)*
Description	The twelfth information item is the geographic coordinate universal transverse Mercator northing / GCN. It is an integer of 1 to 8 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	N
Special Chars	None
Value Constraints	0 <= GCN; integer
Look Up Codes	n/a

13.998_13

Field Name	*Geographic Reference Text (GRT)*
Description	It is a free form text describing a street address or other physical location (such as ‘Corner of Washington and Madison, Geneva, NY’).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 150
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.998_14

Field Name	*Geographic Coordinate Other System Identifier (OSI)*
Description	A fourteenth optional information item geographic coordinate other system identifier / OSI allows for other coordinate systems. This information items specifies the system identifier. It is up to 10 characters in length. Examples are: • MGRS (Military Grid Reference System) • USNG (United States National Grid) • GARS (Global Area Reference System) • GEOREF (World Geographic Reference) • LANDMARK landmark (e.g. hydant) and position relative to the landmark.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

13.998_15

Field Name	*Geographic Coordinate Other System Value (OCV)*
Description	A fifteenth optional information item, is the geographic coordinate other system value / OCV. It shall only be present if OSI is present in the record. It can be up to 126 characters in length. If OSI is LANDMARK, OCV is free text and may be up to 126 characters. For details on the formatting of OCV for the other coordinate systems shown in OSI as examples, see http://earth-info.nga.mil/GandG/coordsys/grids/referencesys.html .
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

13.999

Field Name	**Latent Friction Ridge Image (DATA)**
Description	This mandatory field contains the latent image.
Remarks	See Section 7.2 of ANSI/NIST ITL 1-2011 for details.
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	B
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

Type-13 Variable-Resolution Latent Image Record

13.XXX

Field Name	Reserved for Future Use only by ANSI/NIST-ITL ()
Description	These Field IDs listed are reserved for future version of ANSI/NIST ITL use. These Field IDs are not for local use.
Remarks	13.018-019,021-023,025-199,901,905-992,994
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.001

Field Name	Record Header (LEN - for Traditional Encoding only)
Description	The record header appears as the first field (xx.001) in each Record Type. It contains information particular to the encoding format chosen, in order to enable proper reading of the record. In Traditional encoding, this field contains the record length in bytes (including all information separators). In NIEM-conformant XML encoding, this field contains the RecordCategoryCode, which is the numeric representation of the Record Type.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	N
Special Chars	None
Value Constraints	Depending on encoding
Look Up Codes	n/a

14.002

Field Name	Information Designation Character (IDC)
Description	Each of the records present in a transaction, with the exception of the Type-1 record, shall include a field (xx.002) containing the information designation character / IDC. The value of the IDC shall be a sequentially assigned positive integer starting from zero and incremented by one up to a maximum of 99. IDC references are stated in Type-1 Field 1.003 Transaction content / CNT and shall be used to relate information items in the CNT field of the Type-1 record to the other records in the transaction. Two or more records may share a single IDC solely to identify and link together records that pertain to different representations of the same biometric trait.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= IDC <= 99; integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.003

Field Name	Impression Type (IMP)
Description	This mandatory field shall indicate the manner by which the friction ridge print was obtained.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= IMP <= 3, IMP = 8, 20 <= IMP <= 29; integer
Look Up Codes	FRICTION RIDGE IMPRESSION CODES: 0 = Livescan (type unknown or unspecified) - Fingerprint Plain 1 = Livescan (type unknown or unspecified) - Fingerprint Rolled 2 = Non-livescan (e.g. inked) - Fingerprint Plain 3 = Non-livescan (e.g. inked) - Fingerprint Rolled 4 = Latent Impression - Fingerprint 5 = Latent Tracing - Fingerprint 6 = Latent Photo - Fingerprint 7 = Latent Lift - Fingerprint 8 = Livescan Vertical Swipe - Fingerprint Plain 10 = Livescan (type unknown or unspecified) - Palm 11 = Non-livescan (e.g. inked) - Palm 12 = Latent Impression - Palm 13 = Latent Tracing - Palm 14 = Latent Photo - Palm 15 = Latent Lift - Palm 20 = Livescan Optical Contact - Fingerprint Plain 21 = Livescan Optical Contact - Fingerprint Rolled 22 = Livescan Non-Optical Contact - Fingerprint Plain 23 = Livescan Non-Optical Contact - Fingerprint Rolled 24 = Livescan Optical Contactless - Fingerprint Plain 25 = Livescan Optical Contactless - Fingerprint Rolled 26 = Livescan Non-Optical Contactless - Fingerprint Plain 27 = Livescan Non-Optical Contactless - Fingerprint Rolled 28 = Other 29 = Unknown 30 = Live-scan plantar 31 = Nonlive-scan plantar 32 = Latent impression plantar 33 = Latent tracing plantar 34 = Latent photo plantar 35 = Latent lift plantar 36 = Latent impression unknown friction-ridge 37 = Latent tracing unknown friction-ridge 38 = Latent photo unknown friction-ridge 39 = Latent lift unknown friction-ridge

14.004

Field Name	Source Agency (SRC)
Description	This is the identifier of the agency that actually created the record and supplied the information contained in it.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.005

Field Name	Fingerprint Capture Date (FCD)
Description	This mandatory field shall contain the local date that the fingerprint data contained in the record was captured.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

14.006

Field Name	Horizontal Line Length (HLL)
Description	HLL defines the number of pixels contained on a single horizontal line of the image. The maximum horizontal size is limited to 65,535 pixels in Record Types-4 and 8, and to 99,999 for other record types. The minimum value is 10 pixels. The total image size (HLL times VLL) must be able to be accommodated in Field xx.001 for Traditional encoding.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 5
Char Types	N
Special Chars	None
Value Constraints	10 <= HLL <= 99999; positive integer
Look Up Codes	n/a

14.007

Field Name	Vertical Line Length (VLL)
Description	VLL defines the number of horizontal lines contained in the image. The maximum vertical size is limited to 65,535 pixels in Record Types-4 and 8, and to 99,999 for other record types. The minimum value is 10 pixels.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 5
Char Types	N
Special Chars	None
Value Constraints	10 <= VLL <= 99999; positive integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.008

Field Name	Scale Units (SLC)
Description	The image sampling frequency (pixel density). A value of “1” shall indicate pixels per inch. A value of “2” shall indicate pixels per centimeter. A value of “0” in this field indicates that no scale is provided, and the quotient of THPS/TVPS shall provide the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	SCALE UNIT CODES: 1 = Pixels Per Inch 2 = Pixels Per Centimeter 0 = No Scale

14.009

Field Name	Transmitted Horizontal Pixel Scale (THPS)
Description	This is the integer pixel density used in the horizontal direction of the image if SLC has a value of “1” or “2”. If SLC has a value of “0”, this information item shall contain the horizontal component of the pixel aspect ratio, up to 5 integer digits. For example, if the SLC value = 1, then the value of THPS could be ‘1000’ for a 1000 ppi sensor.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

14.010

Field Name	Transmitted Vertical Pixel Scale (TVPS)
Description	This is the integer pixel density used in the vertical direction of the image if SLC has a value of “1” or “2”. If SLC has a value of “0”, this information item shall contain the vertical component of the pixel aspect ratio, up to 5 integer digits. If SLC is 1 or 2, then TVPS shall equal THPS.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.011

Field Name	Compression Algorithm (CGA)
Description	This is a mandatory field. It shall specify the algorithm used to compress the transmitted color or grayscale images.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 5
Char Types	AN
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	IMAGE COMPRESSION ALGORITHM CODES: NONE = Uncompressed WSQ20 = WSQ Version 2.0 JPEGB = JPEG ISO/IEC 10918 (Lossy) JPEGL = JPEG ISO/IEC 10918 (Lossless) JP2 = JPEG 2000 ISO/IEC 15444-1 (Lossy) JP2L = JPEG 2000 ISO/IEC 15444-1 (Lossless) PNG = Portable Network Graphics

14.012

Field Name	Bits Per Pixel (BPX)
Description	This ASCII field shall contain the number of bits used to represent a pixel. This field shall contain an entry of “8” for normal grayscale values of “0” to “255” or each RGB color component. Any entry in this field greater than “8” shall represent a grayscale or color pixel component with increased precision.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.013

Field Name	Friction Ridge Generalized Position
Description	This field is used in Record types dealing with friction ridges. It specifies which friction ridge biometric sample was collected. Codes 33 and 36 are included for the rolled hypothenar (even though they are palm codes), since it is considered as part of the extended fingerprint set.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= FGP <= 19 or FGP = 33 or 36 or 40 <= FGP <= 50; integer; see Look Up Codes
Look Up Codes	2-FINGER COMBINATIONS: 40 = Right index/middle 41 = Right Middle/Ring 42 = Right Ring/Little 43 = Left Index/Middle 44 = Left Middle/Ring 45 = Left Ring/Little 46 = Right index/ Left index 3-FINGER COMBINATIONS: 47 = Right Index/Middle/Ring 48 = Right Middle/Ring/Little 49 = Left Index/Middle/Ring 50 = Left Middle/Ring/Little ADDITIONAL CODE FOR EXTENDED FINGERPRINT SET: 33 = Right Hypothenar 36 = Left Hypothenar FRICTION RIDGE POSITION CODE - FINGER POSITION: 0 = Unknown Finger 1 = Right Thumb 2 = Right Index Finger 3 = Right Middle Finger 4 = Right Ring Finger 5 = Right Little Finger 6 = Left Thumb 7 = Left Index Finger 8 = Left Middle Finger 9 = Left Ring Finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs 16 = Right extra digit 17 = Left extra digit 18 = Unknown friction ridge 19 = EJI or tip

Type-14 Variable-Resolution Fingerprint Image Record

14.014

Field Name	Print Position Descriptors [Type-14] (PPD)
Description	This ASCII field shall be present if and only if the finger position code "19" appears in [Type-14 Finger Position field]. This field shall consist of two information items. The first is the probable decimal finger position code (0-10). The second information item is the code to indicate the portion of the EJI or tip image that is stored as a single image in the database. There may be up to 17 such images for a single finger. Images of full-length fingers use codes FV1 through FV4.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

14.014_1

Field Name	*Decimal Finger Position Code (DFP)*
Description	The first information item of 14.014 Print Position Descriptors with value of 1 to 10, inclusive or 16 or 17.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= DFP <= 10 or DFP = 16 or 17; see Look Up Codes
Look Up Codes	FRICTION RIDGE POSITION CODE - FINGER POSITION: 0 = Unknown Finger 1 = Right Thumb 2 = Right Index Finger 3 = Right Middle Finger 4 = Right Ring Finger 5 = Right Little Finger 6 = Left Thumb 7 = Left Index Finger 8 = Left Middle Finger 9 = Left Ring Finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs 16 = Right extra digit 17 = Left extra digit 18 = Unknown friction ridge 19 = EJI or tip

Type-14 Variable-Resolution Fingerprint Image Record

14.014_2

Field Name	*Finger Image Code (FIC)*
Description	The second information item of the Search Position Descriptors (SPD) field to indicate the portion of the database to search. Full-length finger joint images use codes FV1 through FV4. Figure 2 is an illustration of the Entire Joint Image for a middle finger with each of the full finger views and constituent parts identified. Multiple portions of the EJI may be listed in a separate subfield.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	AN
Special Chars	None
Value Constraints	EJI, TIP, FV1, FV2, FV3, FV4, PRX, DST or MED
Look Up Codes	JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - FIC ONLY: EJI = Entire Joint Image JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - FVC ONLY: NA = Only a proximal, distal or medial segment is available JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - FVC OR FIC: TIP = Rolled Tip FV1 = Full Finger Rolled Image FV2 = Full Finger Plain Image – left side FV3 = Full Finger Plain Image – center FV4 = Full Finger Plain Image – right side JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - LOS ONLY: NA = Image portion refers to a full finger view, tip or to the entire joint image locations JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - LOS OR FIC: PRX = Proximal DST = Distal Segment MED = Medial Segment

14.015

Field Name	**Print Position Coordinates (PPC)**
Description	Describe the type or portion of the latent image contained in this record and its location within an entire joint image. If finger position code “19” appears in Finger Position field, this set contains offsets to the locations for the bounding box of the EJI, each of the full finger views, or segments within the EJI. This set consists of 6 information items: full finger view, segment location, horizontal offset left and right, and vertical offset top and bottom. For the case of a fingertip, the first information item shall be “TIP”, and the second information item shall be “NA”. The next four information items are the horizontal and vertical offsets as defined above. The six information items will describe either the location of the entire joint image, one full finger view, or segment.
Remarks	n/a
Format	n/a
Num Info Items	6
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.015_1

Field Name	*Full Finger View (FVC)*
Description	This information item is the number of the full finger view with values of "FV1" through "FV4". Values of “FV1” to “FV4” specify the bounding coordinates for each full finger view. For the case of a fingertip, this information item shall be “TIP”. FVC will contain the code “NA” if only a proximal, distal or medial segment is available.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	AN
Special Chars	None
Value Constraints	NA,FV1,FV2,FV3,FV4 or TIP; see Look Up Codes
Look Up Codes	JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - FVC ONLY: NA = Only a proximal, distal or medial segment is available JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - FVC OR FIC: TIP = Rolled Tip FV1 = Full Finger Rolled Image FV2 = Full Finger Plain Image – left side FV3 = Full Finger Plain Image – center FV4 = Full Finger Plain Image – right side

14.015_2

Field Name	*Location of Segment (LOS)*
Description	This information item is used to identify the location of a segment within a full finger view. It will contain the not applicable code “NA” if the image portion refers to a full finger view or to the entire joint image locations. It shall contain “PRX”, “DST”, “MED” for a proximal, distal, or medial segment.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	A
Special Chars	None
Value Constraints	LOS = NA,PRX,DST or MED; see Look Up Codes
Look Up Codes	JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - LOS ONLY: NA = Image portion refers to a full finger view, tip or to the entire joint image locations JOINT IMAGE SEGMENTS, TIP & FINGER VIEW CODES - LOS OR FIC: PRX = Proximal DST = Distal Segment MED = Medial Segment

14.015_3

Field Name	*Left Horizontal Coordinate (LHC)*
Description	It is the horizontal offset in pixels to the left edge of the bounding box relative to the origin positioned in the upper left corner of the image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= LHC <= HLL; positive integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.015_4

Field Name	*Right Horizontal Coordinate (RHC)*
Description	It is the horizontal offset in pixels to the right edge of the bounding box relative to the origin positioned in the upper left corner of the image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	LHC <= RHC <= HLL; positive integer
Look Up Codes	n/a

14.015_5

Field Name	*Top Vertical Coordinate (TVC)*
Description	The vertical offset (pixel counts down) to the top of the bounding box.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= TVC <= VLL; positive integer
Look Up Codes	n/a

14.015_6

Field Name	*Bottom Vertical Coordinate (BVC)*
Description	It is the vertical offset from the upper left corner of the image down to the bottom of the bounding box. It is counted in pixels.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	TVC < BVC <= VLL; positive integer
Look Up Codes	n/a

14.016

Field Name	**Scanned Horizontal Pixel Scale (SHPS)**
Description	This ASCII field shall specify the horizontal pixel density used for scanning providing the SLC field contains a "1" or a "2". Otherwise, it indicates the horizontal component of the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.017

Field Name	Scanned Vertical Pixel Scale (SVPS)
Description	This ASCII field shall specify the vertical pixel density used for scanning providing the SLC field contains a "1" or a "2". Otherwise, it indicates the vertical component of the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

14.018

Field Name	Amputated or Bandaged (AMP)
Description	This optional field shall specify if one or more fingers are amputated or bandaged. This field shall consist of one subfield for each amputated or missing finger. Each subfield shall contain two information items.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.018_1

Field Name	*Friction Ridge Amputation or Bandage Position*
Description	The first information item of the amputated and bandaged field indicating the friction ridge position.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= FRAP <= 10 or FRAP = 16 or 17; see Look Up Codes
Look Up Codes	FRICTION RIDGE POSITION CODE - FINGER POSITION: 0 = Unknown Finger 1 = Right Thumb 2 = Right Index Finger 3 = Right Middle Finger 4 = Right Ring Finger 5 = Right Little Finger 6 = Left Thumb 7 = Left Index Finger 8 = Left Middle Finger 9 = Left Ring Finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs 16 = Right extra digit 17 = Left extra digit 18 = Unknown friction ridge 19 = EJI or tip

14.018_2

Field Name	*Amputated or Bandaged Code (ABC)*
Description	This information item provides the code that describes the reason the finger's image is missing.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 2
Char Types	A
Special Chars	None
Value Constraints	ABC = XX or UP
Look Up Codes	FINGERPRINT MISSING REASON CODES: UP = Unable to print (e.g., bandaged) XX = Partial print due to amputation

Type-14 Variable-Resolution Fingerprint Image Record

14.020

Field Name	Comment (COM)
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

14.021

Field Name	Finger Segment Position(s) (SEG)
Description	This ASCII field shall contain offsets to the locations of image segments containing the individual fingers within the flat images of the four simultaneous fingers from each hand or the two simultaneous thumbs. The offsets are relative to the origin positioned in the upper left corner of the image. The horizontal offsets (X) are the pixel counts to the right, and the vertical offsets (Y) are the pixel counts down. A finger segment is defined by the FINGER NUMBER, the X coordinates (LEFT, RIGHT) and the Y coordinates (TOP, BOTTOM), of its bounding box. The five information items within a finger segment definition are separated by the “US” separator. Individual finger segment definitions are separated. If more than one algorithm is used to segment the image, successive sets finger segmentation positions shall be formatted as above and immediately follow the previous set.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.021_1

Field Name	*Friction Ridge Segment Position (FRSP)*
Description	The first information item of the segment position field indicating the friction ridge position.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	2-FINGER COMBINATIONS: 40 = Right index/middle 41 = Right Middle/Ring 42 = Right Ring/Little 43 = Left Index/Middle 44 = Left Middle/Ring 45 = Left Ring/Little 46 = Right index/ Left index 3-FINGER COMBINATIONS: 47 = Right Index/Middle/Ring 48 = Right Middle/Ring/Little 49 = Left Index/Middle/Ring 50 = Left Middle/Ring/Little FRICTION RIDGE POSITION CODE - FINGER POSITION: 0 = Unknown Finger 1 = Right Thumb 2 = Right Index Finger 3 = Right Middle Finger 4 = Right Ring Finger 5 = Right Little Finger 6 = Left Thumb 7 = Left Index Finger 8 = Left Middle Finger 9 = Left Ring Finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs 16 = Right extra digit 17 = Left extra digit 18 = Unknown friction ridge 19 = EJI or tip

14.021_2

Field Name	*Left Horizontal Coordinate (LHC)*
Description	It is the horizontal offset in pixels to the left edge of the bounding box relative to the origin positioned in the upper left corner of the image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= LHC <= HLL; positive integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.021_3

Field Name	*Right Horizontal Coordinate (RHC)*
Description	It is the horizontal offset in pixels to the right edge of the bounding box relative to the origin positioned in the upper left corner of the image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	LHC <= RHC <= HLL; positive integer
Look Up Codes	n/a

14.021_4

Field Name	*Top Vertical Coordinate (TVC)*
Description	The vertical offset (pixel counts down) to the top of the bounding box.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= TVC <= VLL; positive integer
Look Up Codes	n/a

14.021_5

Field Name	*Bottom Vertical Coordinate (BVC)*
Description	It is the vertical offset from the upper left corner of the image down to the bottom of the bounding box. It is counted in pixels.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	TVC < BVC <= VLL; positive integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.022

Field Name	NIST Quality Metric (NQM)
Description	This ASCII field shall contain the NIST Fingerprint Image Quality (NFIQ) scores for the individual finger(s) derived from the slap impressions or individual rolled fingerprints. It consists of two information items. The first item is the finger number between one and ten. The second item is the quality score which is a quantitative expression of the predicted AFIS matcher accuracy performance of the fingerprint image. The scores range from "1" for the best quality image, to "5" for the worst quality image. A "254" indicates that no score was ever computed while an entry of "255" shall indicate a failed attempt to calculate the image quality metric. These two information items are separated. Individual finger quality definitions are separated.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

14.022_1

Field Name	*Friction Ridge NIST Quality Position (FRNP)*
Description	The first information item of a NIST quality metric field indicating the friction ridge position.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= FRNP <= 10 or FRNP = 16 or 17; see Look Up Codes
Look Up Codes	FRICTION RIDGE POSITION CODE - FINGER POSITION: 0 = Unknown Finger 1 = Right Thumb 2 = Right Index Finger 3 = Right Middle Finger 4 = Right Ring Finger 5 = Right Little Finger 6 = Left Thumb 7 = Left Index Finger 8 = Left Middle Finger 9 = Left Ring Finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs 16 = Right extra digit 17 = Left extra digit 18 = Unknown friction ridge 19 = EJI or tip

Type-14 Variable-Resolution Fingerprint Image Record

14.022_2

Field Name	*NIST Image Quality Score (IQS)*
Description	This information item is the quality score which is a quantitative expression of the predicted AFIS matcher accuracy performance of the fingerprint image. The scores range from "1" for the best quality image, to "5" for the worst quality image. A "254" indicates that no score was ever computed while an entry of "255" shall indicate a failed attempt to calculate the image quality metric.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= IQS <= 5 or IQS = 254 or 255; integer
Look Up Codes	IMAGE PREDICTED QUALITY SCORE QUANTITY CODES: 1 = Best Quality Image 2 = 2nd Best Quality Image 3 = Average Quality Image 4 = Below Average Quality Image 5 = Worst Quality Image 254 = No Score Computed 255 = Failed Attempt

14.023

Field Name	**Segmentation Quality Metric (SQM)**
Description	This ASCII field provides a measure of estimated correctness regarding the accuracy of the location of the segmented finger within the right or left four finger or two thumbs slap image. For each segmented finger, this field shall contain four information items separated. The first information item is the finger number between one and ten. The other three items identify a quality score and the algorithm used to create the quality score. This information is useful to enable the recipient of the quality score to differentiate between quality scores generated by different algorithms and adjust for any differences in processing or analysis as necessary.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.023_1

Field Name	*Friction Ridge Segment Quality Position (FRQP)*
Description	The first information item of a segmentation quality metric field indicating the friction ridge position.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= FRQP <= 10 or FRQP = 16 or 17; see Look Up Codes
Look Up Codes	FRICTION RIDGE POSITION CODE - FINGER POSITION: 0 = Unknown Finger 1 = Right Thumb 2 = Right Index Finger 3 = Right Middle Finger 4 = Right Ring Finger 5 = Right Little Finger 6 = Left Thumb 7 = Left Index Finger 8 = Left Middle Finger 9 = Left Ring Finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs 16 = Right extra digit 17 = Left extra digit 18 = Unknown friction ridge 19 = EJI or tip

14.023_2

Field Name	*Quality Value (QVU)*
Description	This information item shall contain the integer image quality score between 0 and 100 (inclusive) assigned to the image data by a quality algorithm. Higher values indicate better quality. An entry of “255” shall indicate a failed attempt to calculate a quality score. An entry of “254” shall indicate that no attempt to calculate a quality score was made.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	0 <= QVU <= 100 or QVU = 254 or 255; integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.023_3

Field Name	*Algorithm Vendor Identification (QAV)*
Description	This information item shall specify the ID of the vendor of the quality algorithm used to calculate the quality score. This 4-digit hex value is assigned by IBIA and expressed as four ASCII characters. The IBIA shall maintain the Vendor Registry of CBEFF Biometric Organizations that will map the value in this field to a registered organization.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 4
Char Types	H
Special Chars	None
Value Constraints	0000 <= QAV <= FFFF
Look Up Codes	n/a

14.023_4

Field Name	*Algorithm Product Identification (QAP)*
Description	This information item shall specify a numeric product code assigned by the vendor of the quality algorithm, which may be registered with the IBIA, but it is not required to be registered. It indicates which of the vendor's algorithms was used in the calculation of the quality score. This field contains the ASCII representation of the integer product code and should be within the range 1 to 65535.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= QAP <= 65535; positive integer
Look Up Codes	n/a

14.024

Field Name	**Fingerprint Quality Metric (FQM)**
Description	This ASCII field is used to specify one or more different metrics of fingerprint image quality score data for the image stored in this record. The meaning attributed to this metric must be defined and interpreted by the producer of the scoring algorithm or by the person or system used to assign the metric to the fingerprint image. The metric may be a predictor of AFIS matcher accuracy performance or a different metric to indicate a value associated with the quality of the fingerprint image for a particular function. This field may contain one or more subfields, each consisting of four information items separated. The first information item is the finger number. The other three items identify a quality score and the algorithm used to create the quality score. This information is useful to enable the recipient of the quality score to differentiate between quality scores generated by different algorithms and adjust for any differences in processing or analysis as necessary.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.024_1

Field Name	*Friction Ridge Metric Position*
Description	The first information item of a quality metric field indicating the friction ridge position. Codes 33 and 36 are included for the rolled hypothenar (even though they are palm codes), since it is considered as part of the extended fingerprint set.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= FRMP <= 10 or FRMP = 16 or 17; see Look Up Codes
Look Up Codes	FRICTION RIDGE POSITION CODE - FINGER POSITION: 0 = Unknown Finger 1 = Right Thumb 2 = Right Index Finger 3 = Right Middle Finger 4 = Right Ring Finger 5 = Right Little Finger 6 = Left Thumb 7 = Left Index Finger 8 = Left Middle Finger 9 = Left Ring Finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs 16 = Right extra digit 17 = Left extra digit 18 = Unknown friction ridge 19 = EJI or tip

14.024_2

Field Name	*Quality Value (QVU)*
Description	This information item shall contain the integer image quality score between 0 and 100 (inclusive) assigned to the image data by a quality algorithm. Higher values indicate better quality. An entry of “255” shall indicate a failed attempt to calculate a quality score. An entry of “254” shall indicate that no attempt to calculate a quality score was made.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	0 <= QUV <= 100 or QVU = 254 or 255; integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.024_3

Field Name	*Algorithm Vendor Identification (QAV)*
Description	This information item shall specify the ID of the vendor of the quality algorithm used to calculate the quality score. This 4-digit hex value is assigned by IBIA and expressed as four ASCII characters. The IBIA shall maintain the Vendor Registry of CBEFF Biometric Organizations that will map the value in this field to a registered organization.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 4
Char Types	H
Special Chars	None
Value Constraints	0000 <= QAV <= FFFF
Look Up Codes	n/a

14.024_4

Field Name	*Algorithm Product Identification (QAP)*
Description	This information item shall specify a numeric product code assigned by the vendor of the quality algorithm, which may be registered with the IBIA, but it is not required to be registered. It indicates which of the vendor's algorithms was used in the calculation of the quality score. This field contains the ASCII representation of the integer product code and should be within the range 1 to 65535.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= QAP <= 65535; integer
Look Up Codes	n/a

14.025

Field Name	**Alternate Finger Segment Position (ASEG)**
Description	This ASCII field is an alternate approach to describing the locations for each of the image segments of the individual fingers within a flat image containing the capture of four simultaneous fingers or two simultaneous thumbs. This field uses an n-vertex polygon to encompass each finger image segment, where "n" is between 3 and 99. The order of the vertices must be in their consecutive order around the perimeter of the polygon, either clockwise or counterclockwise. No two vertices may occupy the same location. The polygon side defined by the last subfield and the first subfield shall complete the polygon. The polygon must be a simple, plane figure with no sides crossing and no interior holes. This field shall consist of one to four subfields. Each subfield shall consist of a finger number between 1 and 10, the total number of vertices of the polygon encompassing the finger, and the set of consecutive vertices. Each vertex shall be represented as horizontal and vertical pixel offsets relative to the origin positioned in the upper left corner of the image. The horizontal offsets (X) are the pixel counts to the right, and the vertical offsets (Y) are the pixel counts down from the origin. A minimum of three points is required to describe a finger location. The finger number, the number of vertices, each X coordinate, and each Y coordinate. Subfields representing each finger are separated.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.025_1

Field Name	*Friction Ridge Alternate Segment Position (FRAS)*
Description	The first information item of an alternate segment position field indicating the friction ridge position.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= FRAS <= 10 or FRAP = 16 or 17; see Look Up Codes
Look Up Codes	FRICTION RIDGE POSITION CODE - FINGER POSITION: 0 = Unknown Finger 1 = Right Thumb 2 = Right Index Finger 3 = Right Middle Finger 4 = Right Ring Finger 5 = Right Little Finger 6 = Left Thumb 7 = Left Index Finger 8 = Left Middle Finger 9 = Left Ring Finger 10 = Left little finger 11 = Plain right thumb 12 = Plain left thumb 13 = Plain right four fingers 14 = Plain left four fingers 15 = Left & right thumbs 16 = Right extra digit 17 = Left extra digit 18 = Unknown friction ridge 19 = EJI or tip

14.025_2

Field Name	*Number of Points (NOP)*
Description	Specifies the number of vertices.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	3 <= NOP <= 99; integer
Look Up Codes	n/a

14.025_3

Field Name	*Horizontal Point Offset (HPO)*
Description	The pixel counts to the right.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= HPO <= HLL; positive integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.025_4

Field Name	*Vertical Point Offset (VPO)*
Description	The pixel counts down from the origin.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= VPO <= VLL; positive integer
Look Up Codes	n/a

14.026

Field Name	**Simultaneous Capture (SCF)**
Description	This optional field allows the user to link together fingerprint images that were captured simultaneously. Note that this is different from the IDC. This is used, for instance, when individual flat print are captured on different platens simultaneously. Such images should not be stitched together for transmission as a single multiple-finger print image, but they should be coded with the same SCF value to indicate that they were captured simultaneously, and that there is little possibility of a mistaken fingerprint code. The SCF is a 1-based numeric index that is incremented for each simultaneously captured set of images, and shall be omitted otherwise.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= SCF <= 255; positive integer
Look Up Codes	n/a

14.027

Field Name	**Stitched Image Flag (SIF)**
Description	This field signifies that images captured separately were stitched together to form a single image. This field is mandatory if an image has been stitched, and the value shall be set to 'Y'. Otherwise, this field shall not appear in the record.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	SIF = Y
Look Up Codes	YES_ONLY CODES: Y = Yes

Type-14 Variable-Resolution Fingerprint Image Record

14.030

Field Name	Device Monitoring Mode (DMM)
Description	This field provides information describing the human monitoring operation of the image capture device. This field will contain an entry from [possible codes below] to indicate the monitoring mode of the biometric sample capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	7 to 10
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	BIOMETRIC CAPTURE DEVICE MONITORING MODE CODES: CONTROLLED = Operator physically controls the subject to acquire biometric sample ASSISTED = Person available to provide assistance to subject submitting the biometric OBSERVED = Person present to observe operation of the device but provides no assistance UNATTENDED = No one present to observe or provide assistance UNKNOWN = No information is known

14.031

Field Name	Subject Acquisition Profile - Fingerprint (FAP)
Description	The profile levels for fingerprint acquisition are optional and are based upon those listed in the Mobile ID Best Practice Recommendation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 2
Char Types	N
Special Chars	None
Value Constraints	FAP = 10, 20, 30, 40, 50 or 60; integer
Look Up Codes	SUBJECT ACQUISITION PROFILES FOR FINGERPRINT: 10 = FAP 10 20 = FAP 20 30 = FAP 30 40 = FAP 40 50 = FAP 50 60 = FAP 60

14.200 - 14.900

Field Name	User Defined Fields (UDF)
Description	These are fields currently not described by the specification. Prior using these fields, coordination is required with the standard development body.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.902

Field Name	Annotation Information (ANN)
Description	This optional field is used to store annotation, logging, or processing information associated with one or more processing algorithms or latent workstations (other than the FBI developed ULW).
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

14.902_1

Field Name	*Greenwich Mean Time (GMT)*
Description	This field provides a mechanism for expressing the date and time in terms of universal Greenwich Mean Time (GMT) units. This time is independent of the actual time zone where the time and date is recorded. The data is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	n/a
Format	YYYYMMDDHHMMSSZ - for Traditional Encoding
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

14.902_2

Field Name	*Processing Algorithm Name / Version (NAV)*
Description	This field shall contain an unformatted text string of up to 64 characters identifying the name and version of the processing algorithm or workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.902_3

Field Name	*Algorithm Owner (OWN)*
Description	The third information item Type-9 Annotated Information field shall contain an unformatted text string of up to 64 characters with the contact information for the organization that owns the processing algorithm or latent workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

14.902_4

Field Name	*Process Description (PRO)*
Description	The fourth and final information item of the Type-9 Annotated Information field shall contain an unformatted text string of up to 255 characters describing a process or procedure applied to the sample in this Type-XX record.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 255
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

14.903

Field Name	**Device Unique Identifier (DUI)**
Description	The DUI shall contain a string uniquely identifying the device or source of the data. This field shall be one of: • Host PC MAC address, identified by the first character “M”, or • Host PC processor ID, identified by the first character “P”.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	13 to 16
Char Types	ANS
Special Chars	Any
Value Constraints	first character = M or P
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.904

Field Name	Make/Model/Serial Number (MMS)
Description	The MMS contains the make, model and serial number for the capture device. It shall consist of three information items. Each information item shall be 1 to 50 characters. Any or all information items may indicate that information is unknown with the value “0”.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

14.904_1

Field Name	*Make (MAK)*
Description	The name of the manufacturer for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

14.904_2

Field Name	*Model (MOD)*
Description	The model number for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

14.904_3

Field Name	*Serial Number (SER)*
Description	The serial number for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.993

Field Name	Source Agency Name (SAN)
Description	This is an optional field. It may contain up to 125 Unicode characters. It is the name of the agency referenced in Field xx.004: Source agency / SRC for record types 9-99.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 125
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

14.995

Field Name	Associated Context (ASC)
Description	Optional field xx.995 is contained in biometric data sample Record Types 10 and above that may have instances of Record Type-21 linked to it. Record Type-21 stores images and/or recordings that are not the actual source of the biometric data contained in another Record Type, but do show the context of the biometric data. An example would be a photograph of a glass that had latent prints on it. The actual image of the latent prints would appear in a Type-20 record, with the segmented individual images appearing in Type-13 records. This field consists of a maximum of 255 repeating subfields, each of which contains two information items, as described below. This is because there may be multiple instances of associated context records associated with a single biometric sample.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

14.995_1

Field Name	*Associated Context Number (ACN)*
Description	The first information item for the Associated Context field for a particular Record Type-21. This is mandatory for each Field xx.995, when the field is used. It contains an index to a particular instance of a Type-21 record in the transaction. This same index value appears in the appropriate instance of Record Type-21 as Field 21.021: Associated context number / ACN. The value of the ACN shall be a sequentially assigned a positive integer starting from one and incremented by one, not toexceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= ACN <= 255; positive integer
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.995_2

Field Name	*Associated Segment Position (ASP)*
Description	The first information item is the associated segment position / ASP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= ASP <= 99; positive integer
Look Up Codes	n/a

14.996

Field Name	**Hash (HAS)**
Description	Optional field xx.996, is designed for use in Record types 10 and above with a Field xx.999 storing the biometric data. It is comprised of 64 characters representing hexadecimal values. Thus, each character may be a digit from “0” to “9” or a letter “A” through “F”. See the latest version of the Federal Information Processing Standard 180, Secure Hash Standard for information on computing SHA-256 hashes. At the time of this standard’s publication, FIPS 180-37 had been published. It is also possible to use Field xx.996 to contain the hash for data stored externally, which is referenced in Field 20.994: External file reference / EFR and /or Field 21.994: External file reference / EFR . The ability to store files externally is new to this version of the standard, and is only implemented for the two new record types referred to here. Use of the hash enables the receiver of the data to perform quick searches of large databases to determine if the data already exist in the database. It is not intended as an information assurance check.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	64 to 64
Char Types	H
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

14.997

Field Name	**Source Representation (SOR)**
Description	This optional field xx.997 is allowed in biometric data sample Record Types 10 and above that could have the biometric sample derived from a source representation in Record Type-20. The biometric data is stored in Field xx.999.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.997_1

Field Name	*Source Representation Number (SRN)*
Description	This is the first information item and is mandatory for each Field xx.997. It contains an index to a particular instance of a Type-20 record in the transaction. This same index value appears in the appropriate instance of Record Type-20 as Field 20.021: Source representation number / SRN. The value of the SRN shall be a sequentially assigned a positive integer starting from one and incremented by one, not to exceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= SRN <= 255; positive integer
Look Up Codes	n/a

14.997_2

Field Name	*Reference Segment Position (RSP)*
Description	The first information item is the reference segment position / RSP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= RSP <= 99; positive integer
Look Up Codes	n/a

14.998

Field Name	**Geographic Sample Acquisition Location (GEO)**
Description	This field contains the location where the sample/original source/context information was acquired – not where it is stored.
Remarks	n/a
Format	n/a
Num Info Items	15
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.998_01

Field Name	*Universal Time Entry (UTE)*
Description	The coordinated universal time (UTC) where the biometric sample was collected. This time is independent of the actual time zone where the time and date is recorded. The date is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	If sample collection time is unknown, set it to "00000000000000Z."
Format	n/a
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

14.998_02

Field Name	*Latitude Degree Value (LTD)*
Description	The second information item is latitude degree value / LTD. This is a value that specifies the degree of latitude. The value shall be between -90 (inclusive) and +90 (inclusive). The degrees may be expressed as an integer (without a decimal) or a real number including decimals. If decimals are present, then minutes and seconds shall be empty. Examples: Buenos Aires, Argentina: -34 (with minutes LTM = 36) NIST, Gaithersburg, Maryland: 39.137627 (no LTM or LTS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 9
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-90 <= LTD <= 90
Look Up Codes	n/a

14.998_03

Field Name	*Latitude Minute Value (LTM)*
Description	The third information item is latitude minute value / LTM. This is a value that specifies a minute of a degree. The value shall be between 0 (inclusive) to 60 (exclusive). The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall be empty. The minute value is empty, even if the degree value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTM < 60
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.998_04

Field Name	*Latitude Second Value (LTS)*
Description	The fourth information item is the latitude second value / LTS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTS < 60
Look Up Codes	n/a

14.998_05

Field Name	*Longitude Degree Value (LGD)*
Description	The fifth information item is the longitude degree value / LGD. It is a value that specifies the degree of a longitude. The value shall be between -180 (inclusive) and +180 (inclusive). If LTD is present, then LGD shall be present.The degrees may be expressed as whole numbers (without a decimal) or real numbers including decimals. If decimals are present, then minutes and seconds are empty. Examples: Buenos Aires, Argentina: -58 (with minutes LGM = 22) NIST, Gaithersburg, Maryland: -77.216032 (no LGM or LGS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-180 <= LGD <= 180
Look Up Codes	n/a

14.998_06

Field Name	*Longitude Minute Value (LGM)*
Description	The sixth information item is the longitude minute value / LGM. It is a value that specifies a minute of a degree. The value shall be from 0 (inclusive) to 60 (exclusive).The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall not appear. The minute value is empty, even if the degree value is an integer. If LTM is present, then LGM shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGM < 60
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.998_07

Field Name	*Longitude Second Value (LGS)*
Description	The seventh information item is the longitude second value / LGS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer. If LTS is present, then LGS shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGS < 60
Look Up Codes	n/a

14.998_08

Field Name	*Elevation (ELE)*
Description	
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Minus Sign,Period
Value Constraints	-422.000 < ELE < 8848.000; real number
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.998_09

Field Name	*Geodetic Datum Code (GDC)*
Description	The ninth information item is the geodetic datum code / GDC11. It is an alphanumeric value of 3 to 6 characters in length. This information item is used to indicate which coordinate system was used to represent the values in information items 2 through 7. If no entry is made in this information item, then the basis for the values entered in the first eight information items shall be WGS84, the code for the World Geodetic Survey 1984 version - WGS 84 (G873). See look up codes for values.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 6
Char Types	AN
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	GEOGRAPHIC COORDINATE DATUM CODES: AIRY = Airy AUST = Australian National BES = Bessel 1841 BESN = Bessel 1841 (Nambia) CLK66 = Clarke 1866 CLK80 = Clarke 1880 EVER = Everest FIS60 = Fischer 1960 (Mercury) FIS68 = Fischer 1968 GRS67 = GRS 1967 GRS80 = GRS 1980 HELM = Helmert 1906 HOUG = Hough INT = International KRAS = Krassovsky AIRYM = Modified Airy EVERM = Modified Everest FIS60M = Modified Fischer 1960 SA69 = South American 1969 WGS60 = WGS-60 WGS66 = WGS-66 WGS72 = WGS-72 WGS84 = WGS-84 / NAD-83 Other = <entry up to 6 characters>

14.998_10

Field Name	*Geographic Coordinate Universal Transverse Mercator Zone (GCM)*
Description	It is an alphanumeric value of 2 to 3 characters. This is a one or two digit UTM zone number followed by the 8 degree latitudinal band designator (which is a single letter).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	AN
Special Chars	None
Value Constraints	One or two digit UTM zone
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.998_11

Field Name	*Geographic Coordinate Universal Transverse Mercator Easting (GCE)*
Description	The eleventh information item is the geographic coordinate universal transverse Mercator easting / GCE. It is an integer of 1 to 6 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 6
Char Types	N
Special Chars	None
Value Constraints	0 <= GCE; integer
Look Up Codes	n/a

14.998_12

Field Name	*Geographic Coordinate Universal Transverse Mercator Northing (GCN)*
Description	The twelfth information item is the geographic coordinate universal transverse Mercator northing / GCN. It is an integer of 1 to 8 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	N
Special Chars	None
Value Constraints	0 <= GCN; integer
Look Up Codes	n/a

14.998_13

Field Name	*Geographic Reference Text (GRT)*
Description	It is a free form text describing a street address or other physical location (such as ‘Corner of Washington and Madison, Geneva, NY’).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 150
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.998_14

Field Name	*Geographic Coordinate Other System Identifier (OSI)*
Description	A fourteenth optional information item geographic coordinate other system identifier / OSI allows for other coordinate systems. This information items specifies the system identifier. It is up to 10 characters in length. Examples are: • MGRS (Military Grid Reference System) • USNG (United States National Grid) • GARS (Global Area Reference System) • GEOREF (World Geographic Reference) • LANDMARK landmark (e.g. hydant) and position relative to the landmark.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

14.998_15

Field Name	*Geographic Coordinate Other System Value (OCV)*
Description	A fifteenth optional information item, is the geographic coordinate other system value / OCV. It shall only be present if OSI is present in the record. It can be up to 126 characters in length. If OSI is LANDMARK, OCV is free text and may be up to 126 characters. For details on the formatting of OCV for the other coordinate systems shown in OSI as examples, see http://earth-info.nga.mil/GandG/coordsys/grids/referencesys.html .
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

14.999

Field Name	**Fingerprint Image (DATA)**
Description	This mandatory field contains the fingerprint image.
Remarks	See Section 7.2 of ANSI/NIST ITL 1-2011 for details.
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	B
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

Type-14 Variable-Resolution Fingerprint Image Record

14.XXX

Field Name	Reserved for Future Use only by ANSI/NIST-ITL ()
Description	These Field IDs listed are reserved for future version of ANSI/NIST ITL use. These Field IDs are not for local use.
Remarks	14.0.19,028-029,032-199,901,905-992,994
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-17 Iris Image Record

17.001

Field Name	Record Header (LEN - for Traditional Encoding only)
Description	The record header appears as the first field (xx.001) in each Record Type. It contains information particular to the encoding format chosen, in order to enable proper reading of the record. In Traditional encoding, this field contains the record length in bytes (including all information separators). In NIEM-conformant XML encoding, this field contains the RecordCategoryCode, which is the numeric representation of the Record Type.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	N
Special Chars	None
Value Constraints	Dependent on encoding
Look Up Codes	n/a

17.002

Field Name	Information Designation Character (IDC)
Description	Each of the records present in a transaction, with the exception of the Type-1 record, shall include a field (xx.002) containing the information designation character / IDC. The value of the IDC shall be a sequentially assigned positive integer starting from zero and incremented by one up to a maximum of 99. IDC references are stated in Type-1 Field 1.003 Transaction content / CNT and shall be used to relate information items in the CNT field of the Type-1 record to the other records in the transaction. Two or more records may share a single IDC solely to identify and link together records that pertain to different representations of the same biometric trait.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= IDC <= 99; integer
Look Up Codes	n/a

17.003

Field Name	Eye Label (ELR)
Description	This field shall contain an identifier for the eye represented by the image in the record. An entry of “0” in this field indicates that the image in this record is undefined. An entry of “1” in this field indicates that the image in this record is the subject's right eye. An entry of “2” in this field indicates that the image in this record is the subject's left eye.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	ELR = 0, 1 or 2
Look Up Codes	FEATURE IDENTIFIER CODES : 0 = Undefined 1 = Right Eye 2 = Left Eye

Type-17 Iris Image Record

17.004

Field Name	Source Agency (SRC)
Description	This is the identifier of the agency that actually created the record and supplied the information contained in it.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

17.005

Field Name	Iris Capture Date (ICD)
Description	This mandatory field shall contain the date that the iris biometric data contained in the record was captured.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

17.006

Field Name	Horizontal Line Length (HLL)
Description	HLL defines the number of pixels contained on a single horizontal line of the image. The maximum horizontal size is limited to 65,535 pixels in Record Types-4 and 8, and to 99,999 for other record types. The minimum value is 10 pixels. The total image size (HLL times VLL) must be able to be accommodated in Field xx.001 for Traditional encoding.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 5
Char Types	N
Special Chars	None
Value Constraints	10 <= HLL <= 99999; positive integer
Look Up Codes	n/a

Type-17 Iris Image Record

17.007

Field Name	Vertical Line Length (VLL)
Description	VLL defines the number of horizontal lines contained in the image. The maximum vertical size is limited to 65,535 pixels in Record Types-4 and 8, and to 99,999 for other record types. The minimum value is 10 pixels.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 5
Char Types	N
Special Chars	None
Value Constraints	10 <= VLL <= 99999; positive integer
Look Up Codes	n/a

17.008

Field Name	Scale Units (SLC)
Description	The image sampling frequency (pixel density). A value of “1” shall indicate pixels per inch. A value of “2” shall indicate pixels per centimeter. A value of “0” in this field indicates that no scale is provided, and the quotient of THPS/TVPS shall provide the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	0 <= SLC <= 2; integer
Look Up Codes	SCALE UNIT CODES: 1 = Pixels Per Inch 2 = Pixels Per Centimeter 0 = No Scale

17.009

Field Name	Transmitted Horizontal Pixel Scale (THPS)
Description	This is the integer pixel density used in the horizontal direction of the image if SLC has a value of “1” or “2”. If SLC has a value of “0”, this information item shall contain the horizontal component of the pixel aspect ratio, up to 5 integer digits. For example, if the SLC value = 1, then the value of THPS could be ‘1000’ for a 1000 ppi sensor.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-17 Iris Image Record

17.010

Field Name	Transmitted Vertical Pixel Scale (TVPS)
Description	This is the integer pixel density used in the vertical direction of the image if SLC has a value of “1” or “2”. If SLC has a value of “0”, this information item shall contain the vertical component of the pixel aspect ratio, up to 5 integer digits. If SLC is 1 or 2, then TVPS shall equal THPS.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

17.011

Field Name	Compression Algorithm [Type-17] (CGA)
Description	This is a mandatory field. It shall specify the algorithm used to compress the transmitted color or grayscale images. See ANSI/NIST ITL section on compression algorithm for a detailed description of this field.
Remarks	The baseline JPEG algorithm (ISO/IEC 10918) shall not be used for Type-17 iris images. It has been shown that both false non-match and false match rates increase due to the presence of tiling artifacts introduced by JPEG's discrete cosine transform. While JPEG was allowed in prior versions of this standard, it shall not be allowed for new images. Implementers may want to support JPEG decoding for handling legacy images.
Format	n/a
Num Info Items	0
Num Chars	3 to 4
Char Types	AN
Special Chars	None
Value Constraints	CGA = NONE, PNG, JP2 or JP2L; see Look Up Codes
Look Up Codes	IMAGE COMPRESSION ALGORITHM CODES: NONE = Uncompressed WSQ20 = WSQ Version 2.0 JPEGB = JPEG ISO/IEC 10918 (Lossy) JPEGL = JPEG ISO/IEC 10918 (Lossless) JP2 = JPEG 2000 ISO/IEC 15444-1 (Lossy) JP2L = JPEG 2000 ISO/IEC 15444-1 (Lossless) PNG = Portable Network Graphics

17.012

Field Name	Bits Per Pixel (BPX)
Description	This ASCII field shall contain the number of bits used to represent a pixel. This field shall contain an entry of “8” for normal grayscale values of “0” to “255” or each RGB color component. Any entry in this field greater than “8” shall represent a grayscale or color pixel component with increased precision.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	integer
Look Up Codes	n/a

Type-17 Iris Image Record

17.013

Field Name	Color Space (CSP)
Description	It shall contain an entry from the lookup codes below.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 4
Char Types	A
Special Chars	None
Value Constraints	see Look Up Values
Look Up Codes	COLOR SPACE CODES: UNK = Undefined GRAY = Grayscale (monochrome) RGB = Undetermined color space for an RGB image SRGB = SRGB (IEC 61966-2-1) YCC = YCbCr (legacy) SYCC = YCbCr (JPEG 2000 compressed)

17.014

Field Name	Rotation Angle of Eye (RAE)
Description	This field shall indicate the rotation angle of the eye. For rectilinear images, rotation angle = round (65536 * angle / 360) modulo 65536. The angle is measured in degrees from horizontal to the interpupillary line. The value “FFFF” indicates rotation angle of eye is undefined.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	H
Special Chars	None
Value Constraints	0000 < RAE < FFFF
Look Up Codes	n/a

17.015

Field Name	Rotation Uncertainty (RAU)
Description	This field shall indicate the rotation uncertainty. The rotation uncertainty is equal to [round (65536 * uncertainty / 180)]. The uncertainty is measured in degrees and is the absolute value of maximum error. The value “FFFF” indicates uncertainty is undefined.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	H
Special Chars	None
Value Constraints	0000 < RAU < FFFF
Look Up Codes	n/a

Type-17 Iris Image Record

17.016

Field Name	Image Property Code (IPC)
Description	This set shall contain the image property code. It shall contain three information items. The first information item shall indicate the specific horizontal orientation. The second information item shall indicate the specific vertical orientation. The third information item shall indicate the specific scan type. Each information item shall be one character.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

17.016_1

Field Name	*Horizontal Orientation (IHO)*
Description	This field shall be one of: “0” for Undefined, “1” for Base, or “2” for Flipped. “Base” orientation refers to images corresponding to the view facing the subject, where the nasal side of subject’s left eye or outer edge of the subject’s right eye is on the left side the of image. “Flipped” orientation refers to images where the orientation is opposite from that described for “Base”
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	0 <= IHO <= 2; integer
Look Up Codes	IMAGE ORIENTATION CODES: 0 = Undefined 1 = Base 2 = Flipped

17.016_2

Field Name	*Vertical Orientation (IVO)*
Description	This shall be one of: “0” for Undefined, “1” for Base, or “2” for Flipped. “Base” orientation refers to images where the superior (top) edge of the eye is at the top of the image. “Flipped” orientation refers to images where the orientation is opposite from that described for “Base”
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	0 <= IVO <= 2; integer
Look Up Codes	IMAGE ORIENTATION CODES: 0 = Undefined 1 = Base 2 = Flipped

Type-17 Iris Image Record

17.016_3

Field Name	*Specific Scan Type (IST)*
Description	This shall be one of: “0” for Undefined, “1” for Progressive, “2” for Interlace Frame, or “3” for Interlace Field. “Progressive” indicates that the image was captured using progressive scanning, in which case all image lines are generated sequentially. “Interlace Frame” indicates that the image was captured using interlaced scanning, in which two fields are generated in sequence, the first composed of odd numbered lines and the second of even-numbered lines. “Interlace Field” indicates that the image was captured using interlaced scanning, in which only one field is generated, and then each line is duplicated to produce a full size image
Remarks	Prior versions of the standard allowed IST “2” for Interlace Frame, or “3” for Interlace Field. These values shall not be used in records claiming conformance to this version of the standard. Implementers may want to support interlaced imagery for handling legacy images. The deprecated values were defined as follows: • “Interlace Frame” indicates that the image was captured using interlaced scanning, in which two fields are generated in sequence, the first composed of oddnumbered lines and the second of even-numbered lines. • “Interlace Field” indicates that the image was captured using interlaced scanning, in which only one field is generated, and then each line is duplicated to produce a full size image.
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	IST = 0 or 1
Look Up Codes	SCAN CODES: 0 = Undefined 1 = Progressive 2 = Interlace Frame 3 = Interlace Field

17.017

Field Name	**Device Unique Identifier (DUI)**
Description	The DUI shall contain a string uniquely identifying the device or source of the data. This field shall be one of: • Host PC MAC address, identified by the first character “M”, or • Host PC processor ID, identified by the first character “P”.
Remarks	Note: ANSI/NIST ITL 1-2011 has deleted the options for “Serial number or No serial number” from Field 17.017, since it is available in the Make / Model / Serial Number field.
Format	n/a
Num Info Items	0
Num Chars	13 to 16
Char Types	ANS
Special Chars	Any
Value Constraints	first character = M or P
Look Up Codes	n/a

Type-17 Iris Image Record

17.019

Field Name	Make/Model/Serial Number (MMS)
Description	The MMS contains the make, model and serial number for the capture device. It shall consist of three information items. Each information item shall be 1 to 50 characters. Any or all information items may indicate that information is unknown with the value “0”.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

17.019_1

Field Name	*Make (MAK)*
Description	The name of the manufacturer for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

17.019_2

Field Name	*Model (MOD)*
Description	The model number for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

17.019_3

Field Name	*Serial Number (SER)*
Description	The serial number for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-17 Iris Image Record

17.020

Field Name	Eye Color (ECL)
Description	This field shall specify the subject's eye color.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 3
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	ALPHA EYE COLOR CODES: BLK = Black BLU = Blue BRO = Brown GRN = Green GRY = Gray HAZ = Hazel MAR = Maroon MUL = Multicolored PNK = Pink XXX = Unknown

17.021

Field Name	Comment (COM)
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

17.022

Field Name	Scanned Horizontal Pixel Scale (SHPS)
Description	This ASCII field shall specify the horizontal pixel density used for scanning providing the SLC field contains a "1" or a "2". Otherwise, it indicates the horizontal component of the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-17 Iris Image Record

17.023

Field Name	Scanned Vertical Pixel Scale (SVPS)
Description	This ASCII field shall specify the vertical pixel density used for scanning providing the SLC field contains a "1" or a "2". Otherwise, it indicates the vertical component of the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

17.024

Field Name	Image Quality Score (IQS)
Description	This ASCII field shall specify a quality score data for the iris image stored in this record. Each subfield shall contain three information items. They identify a quality score and the algorithm used to create the quality score. This information is useful to enable the recipient of the quality score to differentiate between quality scores generated by different algorithms and adjust for any differences in processing or analysis as necessary.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

17.024_1

Field Name	*Quality Value (QVU)*
Description	This information item shall contain the integer image quality score between 0 and 100 (inclusive) assigned to the image data by a quality algorithm. Higher values indicate better quality. An entry of “255” shall indicate a failed attempt to calculate a quality score. An entry of “254” shall indicate that no attempt to calculate a quality score was made.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	0 <= QVU <= 100 or QVU = 254 or 255; integer
Look Up Codes	n/a

Type-17 Iris Image Record

17.024_2

Field Name	*Algorithm Vendor Identification (QAV)*
Description	This information item shall specify the ID of the vendor of the quality algorithm used to calculate the quality score. This 4-digit hex value is assigned by IBIA and expressed as four ASCII characters. The IBIA shall maintain the Vendor Registry of CBEFF Biometric Organizations that will map the value in this field to a registered organization.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	4 to 4
Char Types	H
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

17.024_3

Field Name	*Algorithm Product Identification (QAP)*
Description	This information item shall specify a numeric product code assigned by the vendor of the quality algorithm, which may be registered with the IBIA, but it is not required to be registered. It indicates which of the vendor's algorithms was used in the calculation of the quality score. This field contains the ASCII representation of the integer product code and should be within the range 1 to 65535.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	1 <= QAP <= 65535; positive integer
Look Up Codes	n/a

Type-17 Iris Image Record

17.025

Field Name	Effective Acquisition Spectrum (EAS)
Description	This field indicates the acquisition spectrum used in capturing the iris image. The acquisition spectrum is the effective acquisition spectrum, which is limited by both the lighting spectrum and the spectrum limitations of the acquisition device: it is defined by the overlap of the two spectra. This field contains an alphabetic entry selected from the column “Value” in Look Up Codes below.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 9
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	LIGHTING SPECTRUM ACQUISITION CODES: NIR = Near-infrared illumination. Approx. 700-900 nm. VIS = Visible full spectrum illumination. Approx. 380-750 nm. OTHER = Other illumination DEFINED = Defined acquisition spectrum, in range of nanometers rounded to the nearest 10nm, e.g. 0740 to 0760 or 0800 to 0830. This option provides the means to specify the acquisition spectrum when known with precision. When this value is used, two information items shall accompany it. The format of these two information items shall be a 4-digit integer specifying the minimum of the spectrum range in nanometers, followed by a 4-digit integer specifying the maximum of the spectrum range in nanometers. The minimum value shall be less than or equal to the maximum value. RED = Red portion of visible full-spectrum illumination. Approx. 620–750 nm. UNDEFINED = This value shall be used when the effective spectrumis unknown or unavailable, and is not better described by one of the other values.

17.026

Field Name	Iris Diameter (IRD)
Description	This field shall specify the expected iris diameter in pixels.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 4
Char Types	N
Special Chars	None
Value Constraints	10 < IRD < 9999; positive integer
Look Up Codes	n/a

17.027

Field Name	Specified Spectrum Value (SSV)
Description	This field shall only be present if Field 17.025: Effective acquisition spectrum / EAS has a value of 'DEFINED'. It is comprised of two information items: * The first information item is is spectrum lower bound / LOW. * The second information item is spectrum upper bound / HIG.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-17 Iris Image Record

17.027_1

Field Name	*Spectrum Lower Bound (LOW)*
Description	It is a three digit entry indicating the lower frequency bound in nm.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 4
Char Types	N
Special Chars	None
Value Constraints	500 <= LOW; positive integer evenly divisible by 10
Look Up Codes	n/a

17.027_2

Field Name	*Spectrum Upper Bound (HIG)*
Description	It is a three digit entry indicating the upper frequency bound in nm.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 4
Char Types	N
Special Chars	None
Value Constraints	510 <= HIG; positive integer evenly divisible by 10
Look Up Codes	n/a

17.028

Field Name	**Damaged or Missing Eye (DME)**
Description	This optional field shall specify if one or both eyes are unable to provide usable iris images. The eye position is specified in Field 17.003: Eye Label / ELR . This field shall contain a code from Look Up Codes. “UC” should be entered if the eye is physically present, but a usable iris image cannot be captured. An example is when the eye is swollen shut due to injury.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 2
Char Types	A
Special Chars	None
Value Constraints	n/a
Look Up Codes	MISSING AND DAMAGED EYE CODES: MA = Missing or Artificial Eye UC = Unable to Capture Image

Type-17 Iris Image Record

17.030

Field Name	Device Monitoring Mode (DMM)
Description	This field provides information describing the human monitoring operation of the image capture device. This field will contain an entry from [possible codes below] to indicate the monitoring mode of the biometric sample capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	7 to 10
Char Types	A
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	BIOMETRIC CAPTURE DEVICE MONITORING MODE CODES: CONTROLLED = Operator physically controls the subject to acquire biometric sample ASSISTED = Person available to provide assistance to subject submitting the biometric OBSERVED = Person present to observe operation of the device but provides no assistance UNATTENDED = No one present to observe or provide assistance UNKNOWN = No information is known

17.031

Field Name	Subject Acquisition Profile - IRIS (IAP)
Description	This optional field lists the IAP level associated with the iris acquisition device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 2
Char Types	N
Special Chars	None
Value Constraints	IAP = 20, 30 or 40
Look Up Codes	n/a

17.032

Field Name	Iris Storage Format (ISF)
Description	This field shall indicate the storage format of the iris image. ISF format code 1 is designated for high resolution outputs. ISF level 2 is the format output in most commerical iris acquisition systems and corresponds to the dimensions of the Video Graphics Array (VGA).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	ISF = 1, 2, 3 or 7
Look Up Codes	IRIS STORAGE FORMTA: 1 = Unconstrained 2 = Raw: 640x480 3 = Cropped 7 = Cropped and Masked

Type-17 Iris Image Record

17.033

Field Name	Iris Pupil Boundary (IPB)
Description	This optional field defines the pupillary boundary, between the iris and pupil.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

17.033_1

Field Name	*Boundary Code (BYC)*
Description	Defines the shape of a boundary of a feature within an image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	BYC = C, E or P; see Look Up Codes
Look Up Codes	BOUNDARY DEFINITION CODES: C = Circle E = Ellipse P = Polygon

17.033_2

Field Name	*Number of Points (NOP)*
Description	Specifies the number of vertices.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	2 <= NOP <= 99; positive integer
Look Up Codes	n/a

17.033_3

Field Name	*Horizontal Point Offset (HPO)*
Description	The pixel counts to the right.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= HPO <= HLL; positive integer
Look Up Codes	n/a

Type-17 Iris Image Record

17.033_4

Field Name	*Vertical Point Offset (VPO)*
Description	The pixel counts down from the origin.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= VPO <= VLL; positive integer
Look Up Codes	n/a

17.034

Field Name	**Iris Sclera Boundary (ISB)**
Description	This optional field defines the limbic boundary, between the iris and sclera.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

17.034_1

Field Name	*Boundary Code (BYC)*
Description	Defines the shape of a boundary of a feature within an image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	BYC = C, E or P; see Look Up Codes
Look Up Codes	BOUNDARY DEFINITION CODES: C = Circle E = Ellipse P = Polygon

17.034_2

Field Name	*Number of Points (NOP)*
Description	Specifies the number of vertices.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	2 <= NOP <= 99; positive integer
Look Up Codes	n/a

Type-17 Iris Image Record

17.034_3

Field Name	*Horizontal Point Offset (HPO)*
Description	The pixel counts to the right.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= HPO <= HLL; positive integer
Look Up Codes	n/a

17.034_4

Field Name	*Vertical Point Offset (VPO)*
Description	The pixel counts down from the origin.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= VPO <= VLL; positive integer
Look Up Codes	n/a

17.035

Field Name	**Upper Eyelid Boundary (UEB)**
Description	This optional field defines the boundary between the upper eyelid and the eye.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

17.035_1

Field Name	*Boundary Code (BYC)*
Description	Defines the shape of a boundary of a feature within an image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	BYC = P; see Look Up Codes
Look Up Codes	BOUNDARY DEFINITION CODES: C = Circle E = Ellipse P = Polygon

Type-17 Iris Image Record

17.035_2

Field Name	*Number of Points (NOP)*
Description	Specifies the number of vertices.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	3 <= NOP <= 99; positive integer
Look Up Codes	n/a

17.035_3

Field Name	*Horizontal Point Offset (HPO)*
Description	The pixel counts to the right.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= HPO <= HLL; positive integer
Look Up Codes	n/a

17.035_4

Field Name	*Vertical Point Offset (VPO)*
Description	The pixel counts down from the origin.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= VPO <= VLL; positive integer
Look Up Codes	n/a

17.036

Field Name	**Lower Eyelid Boundary (LEB)**
Description	This optional field defines the boundary between the lower eyelid and the eye.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-17 Iris Image Record

17.036_1

Field Name	*Boundary Code (BYC)*
Description	Defines the shape of a boundary of a feature within an image.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	BYC = P; see Look Up Codes
Look Up Codes	BOUNDARY DEFINITION CODES: C = Circle E = Ellipse P = Polygon

17.036_2

Field Name	*Number of Points (NOP)*
Description	Specifies the number of vertices.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	3 <= NOP <= 99; positive integer
Look Up Codes	n/a

17.036_3

Field Name	*Horizontal Point Offset (HPO)*
Description	The pixel counts to the right.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= HPO <= HLL; positive integer
Look Up Codes	n/a

17.036_4

Field Name	*Vertical Point Offset (VPO)*
Description	The pixel counts down from the origin.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= VPO <= VLL; positive integer
Look Up Codes	n/a

Type-17 Iris Image Record

17.037

Field Name	Non-eyelid Occlusions (NEO)
Description	This optional field defines the outline and contents of any non-eyelid occlusions that partially or totally blocks the image of the iris. It is a contour or a polygon.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

17.037_1

Field Name	*Occlusion Opacity (OCY)*
Description	The first information item of the Occlusions (OCC) field.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	OCY = T, I, L or S; see Look Up Codes
Look Up Codes	OCCLUSION OPACITY CODES: T = (Total) There is no detail in the area of the occlusion. I = (Interference) The occlusion contains interfering texture such as eyelashes, hair or reflection. L = (Partial Light) There is detail in the area of the occlusion that is lighter than the rest of the face or iris. S = (Partial Shadow) There is detail in the area of the occlusion that is darker than the rest of the face or

17.037_2

Field Name	*Occlusion Type (OCT)*
Description	The second information item of the OCCLUSIONS (OCC) field.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	OCT = L, S, C, R or O; see Look Up Codes
Look Up Codes	OCCLUSION CODES: L = Lashes - Eyelashes or reflections of eyelashes (iris only) H = Head covering - Hair, hat, veil, burka, or other head covering (face only) S = Specular - Specularity, reflection of light C = Shadow - Shadow cast R = Reflection - Reflection of an object O = Other - Any other occlusion, such as eyeglass frames blocking the image

Type-17 Iris Image Record

17.037_3

Field Name	*Number of Points (NOP)*
Description	Specifies the number of vertices.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	3 <= NOP <= 99; positive integer
Look Up Codes	n/a

17.037_4

Field Name	*Horizontal Point Offset (HPO)*
Description	The pixel counts to the right.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= HPO <= HLL; positive integer
Look Up Codes	n/a

17.037_5

Field Name	*Vertical Point Offset (VPO)*
Description	The pixel counts down from the origin.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= VPO <= VLL; positive integer
Look Up Codes	n/a

17.040

Field Name	**Range (RAN)**
Description	This optional field contains the estimated distance from the lens of the camera to the iris. It shall be measured in centimeters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 7
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-17 Iris Image Record

17.041

Field Name	Frontal Gaze (GAZ)
Description	This optional field describes the metric that estimates the degree of eye(s) sight-angle relative to the camera. The angle shall be reported in degrees and defined as between: • The optical axis of the eye, and • A line connecting the optical center of the eye and the optical center of the camera. This measure is inclusive of both head angular orientation and eye-gaze angle relative to the head. The inclusive approach for gaze direction is not intended to be representative of the possible difficulty with iris segmentation due to non-frontal head orientation. Hence, two images with the same frontal gaze, but significantly different frontal head orientation may perform differently with different segmentation and matching algorithms.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= GAZ <= 90; positive integer
Look Up Codes	n/a

17.200 - 17.900

Field Name	User Defined Fields (UDF)
Description	These are fields currently not described by the specification. Prior using these fields, coordination is required with the standard development body.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

17.902

Field Name	Annotation Information (ANN)
Description	This optional field is used to store annotation, logging, or processing information associated with one or more processing algorithms or latent workstations (other than the FBI developed ULW).
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-17 Iris Image Record

17.902_1

Field Name	*Greenwich Mean Time (GMT)*
Description	This field provides a mechanism for expressing the date and time in terms of universal Greenwich Mean Time (GMT) units. This time is independent of the actual time zone where the time and date is recorded. The data is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	n/a
Format	YYYYMMDDHHMMSSZ - for Traditional Encoding
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

17.902_2

Field Name	*Processing Algorithm Name / Version (NAV)*
Description	This field shall contain an unformatted text string of up to 64 characters identifying the name and version of the processing algorithm or workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

17.902_3

Field Name	*Algorithm Owner (OWN)*
Description	The third information item Type-9 Annotated Information field shall contain an unformatted text string of up to 64 characters with the contact information for the organization that owns the processing algorithm or latent workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-17 Iris Image Record

17.902_4

Field Name	*Process Description (PRO)*
Description	The fourth and final information item of the Type-9 Annotated Information field shall contain an unformatted text string of up to 255 characters describing a process or procedure applied to the sample in this Type-XX record.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 255
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

17.993

Field Name	**Source Agency Name (SAN)**
Description	This is an optional field. It may contain up to 125 Unicode characters. It is the name of the agency referenced in Field xx.004: Source agency / SRC for record types 9-99.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 125
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

17.995

Field Name	**Associated Context (ASC)**
Description	Optional field xx.995 is contained in biometric data sample Record Types 10 and above that may have instances of Record Type-21 linked to it. Record Type-21 stores images and/or recordings that are not the actual source of the biometric data contained in another Record Type, but do show the context of the biometric data. An example would be a photograph of a glass that had latent prints on it. The actual image of the latent prints would appear in a Type-20 record, with the segmented individual images appearing in Type-13 records. This field consists of a maximum of 255 repeating subfields, each of which contains two information items, as described below. This is because there may be multiple instances of associated context records associated with a single biometric sample.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-17 Iris Image Record

17.995_1

Field Name	*Associated Context Number (ACN)*
Description	The first information item for the Associated Context field for a particular Record Type-21. This is mandatory for each Field xx.995, when the field is used. It contains an index to a particular instance of a Type-21 record in the transaction. This same index value appears in the appropriate instance of Record Type-21 as Field 21.021: Associated context number / ACN. The value of the ACN shall be a sequentially assigned a positive integer starting from one and incremented by one, not toexceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= ACN <= 255; positive integer
Look Up Codes	n/a

17.995_2

Field Name	*Associated Segment Position (ASP)*
Description	The first information item is the associated segment position / ASP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= ASP <= 99; positive integer
Look Up Codes	n/a

17.996

Field Name	**Hash (HAS)**
Description	Optional field xx.996, is designed for use in Record types 10 and above with a Field xx.999 storing the biometric data. It is comprised of 64 characters representing hexadecimal values. Thus, each character may be a digit from “0” to “9” or a letter “A” through “F”. See the latest version of the Federal Information Processing Standard 180, Secure Hash Standard for information on computing SHA-256 hashes. At the time of this standard’s publication, FIPS 180-37 had been published. It is also possible to use Field xx.996 to contain the hash for data stored externally, which is referenced in Field 20.994: External file reference / EFR and /or Field 21.994: External file reference / EFR . The ability to store files externally is new to this version of the standard, and is only implemented for the two new record types referred to here. Use of the hash enables the receiver of the data to perform quick searches of large databases to determine if the data already exist in the database. It is not intended as an information assurance check.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	64 to 64
Char Types	H
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

Type-17 Iris Image Record

17.997

Field Name	Source Representation (SOR)
Description	This optional field xx.997 is allowed in biometric data sample Record Types 10 and above that could have the biometric sample derived from a source representation in Record Type-20. The biometric data is stored in Field xx.999.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

17.997_1

Field Name	*Source Representation Number (SRN)*
Description	This is the first information item and is mandatory for each Field xx.997. It contains an index to a particular instance of a Type-20 record in the transaction. This same index value appears in the appropriate instance of Record Type-20 as Field 20.021: Source representation number / SRN. The value of the SRN shall be a sequentially assigned a positive integer starting from one and incremented by one, not to exceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= SRN <= 255; positive integer
Look Up Codes	n/a

17.997_2

Field Name	*Reference Segment Position (RSP)*
Description	The first information item is the reference segment position / RSP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= RSP <= 99; positive integer
Look Up Codes	n/a

Type-17 Iris Image Record

17.998

Field Name	Geographic Sample Acquisition Location (GEO)
Description	This field contains the location where the sample/original source/context information was acquired – not where it is stored.
Remarks	n/a
Format	n/a
Num Info Items	15
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

17.998_01

Field Name	*Universal Time Entry (UTE)*
Description	The coordinated universal time (UTC) where the biometric sample was collected. This time is independent of the actual time zone where the time and date is recorded. The date is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	If sample collection time is unknown, set it to "00000000000000Z."
Format	n/a
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

17.998_02

Field Name	*Latitude Degree Value (LTD)*
Description	The second information item is latitude degree value / LTD. This is a value that specifies the degree of latitude. The value shall be between -90 (inclusive) and +90 (inclusive). The degrees may be expressed as an integer (without a decimal) or a real number including decimals. If decimals are present, then minutes and seconds shall be empty. Examples: Buenos Aires, Argentina: -34 (with minutes LTM = 36) NIST, Gaithersburg, Maryland: 39.137627 (no LTM or LTS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 9
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-90 <= LTD <= 90
Look Up Codes	n/a

Type-17 Iris Image Record

17.998_03

Field Name	*Latitude Minute Value (LTM)*
Description	The third information item is latitude minute value / LTM. This is a value that specifies a minute of a degree. The value shall be between 0 (inclusive) to 60 (exclusive). The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall be empty. The minute value is empty, even if the degree value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTM < 60
Look Up Codes	n/a

17.998_04

Field Name	*Latitude Second Value (LTS)*
Description	The fourth information item is the latitude second value / LTS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTS < 60
Look Up Codes	n/a

17.998_05

Field Name	*Longitude Degree Value (LGD)*
Description	The fifth information item is the longitude degree value / LGD. It is a value that specifies the degree of a longitude. The value shall be between -180 (inclusive) and +180 (inclusive). If LTD is present, then LGD shall be present.The degrees may be expressed as whole numbers (without a decimal) or real numbers including decimals. If decimals are present, then minutes and seconds are empty. Examples: Buenos Aires, Argentina: -58 (with minutes LGM = 22) NIST, Gaithersburg, Maryland: -77.216032 (no LGM or LGS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-180 <= LGD <= 180
Look Up Codes	n/a

Type-17 Iris Image Record

17.998_06

Field Name	*Longitude Minute Value (LGM)*
Description	The sixth information item is the longitude minute value / LGM. It is a value that specifies a minute of a degree. The value shall be from 0 (inclusive) to 60 (exclusive).The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall not appear. The minute value is empty, even if the degree value is an integer. If LTM is present, then LGM shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGM < 60
Look Up Codes	n/a

17.998_07

Field Name	*Longitude Second Value (LGS)*
Description	The seventh information item is the longitude second value / LGS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer. If LTS is present, then LGS shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGS < 60
Look Up Codes	n/a

17.998_08

Field Name	*Elevation (ELE)*
Description	
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Minus Sign,Period
Value Constraints	-422.000 < ELE < 8848.000; real number
Look Up Codes	n/a

Type-17 Iris Image Record

17.998_09

Field Name	*Geodetic Datum Code (GDC)*
Description	The ninth information item is the geodetic datum code / GDC11. It is an alphanumeric value of 3 to 6 characters in length. This information item is used to indicate which coordinate system was used to represent the values in information items 2 through 7. If no entry is made in this information item, then the basis for the values entered in the first eight information items shall be WGS84, the code for the World Geodetic Survey 1984 version - WGS 84 (G873). See look up codes for values.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 6
Char Types	AN
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	GEOGRAPHIC COORDINATE DATUM CODES: AIRY = Airy AUST = Australian National BES = Bessel 1841 BESN = Bessel 1841 (Nambia) CLK66 = Clarke 1866 CLK80 = Clarke 1880 EVER = Everest FIS60 = Fischer 1960 (Mercury) FIS68 = Fischer 1968 GRS67 = GRS 1967 GRS80 = GRS 1980 HELM = Helmert 1906 HOUG = Hough INT = International KRAS = Krassovsky AIRYM = Modified Airy EVERM = Modified Everest FIS60M = Modified Fischer 1960 SA69 = South American 1969 WGS60 = WGS-60 WGS66 = WGS-66 WGS72 = WGS-72 WGS84 = WGS-84 / NAD-83 Other = <entry up to 6 characters>

17.998_10

Field Name	*Geographic Coordinate Universal Transverse Mercator Zone (GCM)*
Description	It is an alphanumeric value of 2 to 3 characters. This is a one or two digit UTM zone number followed by the 8 degree latitudinal band designator (which is a single letter).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	AN
Special Chars	None
Value Constraints	One or two digit UTM zone
Look Up Codes	n/a

Type-17 Iris Image Record

17.998_11

Field Name	*Geographic Coordinate Universal Transverse Mercator Easting (GCE)*
Description	The eleventh information item is the geographic coordinate universal transverse Mercator easting / GCE. It is an integer of 1 to 6 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 6
Char Types	N
Special Chars	None
Value Constraints	0 <= GCE; integer
Look Up Codes	n/a

17.998_12

Field Name	*Geographic Coordinate Universal Transverse Mercator Northing (GCN)*
Description	The twelfth information item is the geographic coordinate universal transverse Mercator northing / GCN. It is an integer of 1 to 8 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	N
Special Chars	None
Value Constraints	0 <= GCN; integer
Look Up Codes	n/a

17.998_13

Field Name	*Geographic Reference Text (GRT)*
Description	It is a free form text describing a street address or other physical location (such as ‘Corner of Washington and Madison, Geneva, NY’).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 150
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-17 Iris Image Record

17.998_14

Field Name	*Geographic Coordinate Other System Identifier (OSI)*
Description	A fourteenth optional information item geographic coordinate other system identifier / OSI allows for other coordinate systems. This information items specifies the system identifier. It is up to 10 characters in length. Examples are: • MGRS (Military Grid Reference System) • USNG (United States National Grid) • GARS (Global Area Reference System) • GEOREF (World Geographic Reference) • LANDMARK landmark (e.g. hydant) and position relative to the landmark.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

17.998_15

Field Name	*Geographic Coordinate Other System Value (OCV)*
Description	A fifteenth optional information item, is the geographic coordinate other system value / OCV. It shall only be present if OSI is present in the record. It can be up to 126 characters in length. If OSI is LANDMARK, OCV is free text and may be up to 126 characters. For details on the formatting of OCV for the other coordinate systems shown in OSI as examples, see http://earth-info.nga.mil/GandG/coordsys/grids/referencesys.html .
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

17.999

Field Name	**Iris Image (DATA)**
Description	This field contains the iris image.
Remarks	See Section 7.2 of ANSI/NIST ITL 1-2011 for details.
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	B
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

Type-17 Iris Image Record

17.XXX

Field Name	Reserved for Future Use only by ANSI/NIST-ITL ()
Description	These Field IDs listed are reserved for future version of ANSI/NIST ITL use. These Field IDs are not for local use.
Remarks	17.029,038-039,042-199,901,903-992,994
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-18 DNA Record

18.001

Field Name	Record Header (LEN - for Traditional Encoding only)
Description	The record header appears as the first field (xx.001) in each Record Type. It contains information particular to the encoding format chosen, in order to enable proper reading of the record. In Traditional encoding, this field contains the record length in bytes (including all information separators). In NIEM-conformant XML encoding, this field contains the RecordCategoryCode, which is the numeric representation of the Record Type.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	N
Special Chars	None
Value Constraints	Dependent on encoding
Look Up Codes	n/a

18.002

Field Name	Information Designation Character (IDC)
Description	Each of the records present in a transaction, with the exception of the Type-1 record, shall include a field (xx.002) containing the information designation character / IDC. The value of the IDC shall be a sequentially assigned positive integer starting from zero and incremented by one up to a maximum of 99. IDC references are stated in Type-1 Field 1.003 Transaction content / CNT and shall be used to relate information items in the CNT field of the Type-1 record to the other records in the transaction. Two or more records may share a single IDC solely to identify and link together records that pertain to different representations of the same biometric trait.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= IDC <= 99; integer
Look Up Codes	n/a

18.003

Field Name	DNA Laboratory Setting (DLS)
Description	This field is mandatory. The first information item is mandatory. The remaining information items are optional for all unit types.
Remarks	n/a
Format	n/a
Num Info Items	7
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-18 DNA Record

18.003_1

Field Name	*Unit Type (UTY)*
Description	The first information item unit type / UTY is mandatory and contains a numeric value.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	1 <= UTY <= 4 integer
Look Up Codes	DNA LABORATORY SETTING: 1 = Laboratory DNA processing unit 2 = Rapid DNA / mobile processing unit 3 = Other 4 = Unknown

18.003_2

Field Name	*Lab Type (LTY)*
Description	The second information item is the lab type / LTY. It is mandatory if the value for UTY is 1 or 2. It is not entered otherwise. When present, this information item contains a single character describing the laboratory that processed the DNA.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	LTY = G, I, O or U
Look Up Codes	LAB CODES: G = Government I = Industry O = Other Laboratory U = Unknown

Type-18 DNA Record

18.003_3

Field Name	*Accreditation Information (ACC)*
Description	The third information item is the accreditation status / AFG. It is mandatory if the value for UTY is 1 or 2. It shall not be entered otherwise. When present, this information item shall contain a minimum of one numeric character if the value is 0 or a minimum of two characters (one numeric followed immediately by one alpha character if the lab is accredited). If the laboratory has an unknown accreditation status, three numeric characters '255' are entered. The value indicates the accreditation and scope describing the laboratory that processed the DNA and the scope of their accreditation respectively. The values in this information item shall be separated individually by commas between accreditation and scope pairings. More than one certification flag and scope of accreditation is permitted. The scope of accreditation is incorporated as values immediately following each of those identified in the record in the value of the third information item. The scope of accreditation is for what DNA technology the laboratory is accredited.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 35
Char Types	ANS
Special Chars	Comma
Value Constraints	Numeric (0,1,2,3,4,5,6 or 255). It may be followed by an alpha string (N, M, D and/or O). That may be followed by up to 5 more such strings, each separated by a comma. The entire string is treated as a single information item.
Look Up Codes	ACCREDITATION STATUS CODES: 0 = No Accreditation 1 = ISO Accreditation 2 = GLP Accreditation 3 = AABB Accreditation 4 = ISO/ILAC Guide 19 Accreditation 5 = ASCLD Lab Accreditation 6 = Other 255 = Unknown DNA SCOPE CODES: N = Nuclear M = Mitochondrial D = Database O = Other

18.003_4

Field Name	*Name of the Organization (NOO)*
Description	The fourth information item is the name of the organization / NOO that originally processed the DNA data (This may be different from the entry in Field 18.004: Originating agency / ORG . This is an optional information item that may be up to 100 alphanumeric characters in length.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.003_5

Field Name	*Point of Contact (POC)*
Description	The fifth information item is the point of contact / POC who composed the DNA record metadata. This is an optional information item that could include the name, telephone number and e-mail address of the person responsible for this record submission. This information item may be up to 200 alphanumeric characters in length.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 200
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.003_6

Field Name	*Code of Sending Country (CSC)*
Description	The sixth information item is the ISO-3166-1 code of the sending country or sub-country / CSC. This is the code of where the DNA was processed -- not necessarily the nation of the agency entered in Field 18.004: Originating agency / ORG . This is an optional information item. All three formats are allowed (Alpha2, Alpha3 and Numeric). A country code is either 2 or 3 characters long.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	AN
Special Chars	None
Value Constraints	Value from ISO-3166-1
Look Up Codes	ISO-3166-1 ALPHA3 CODES: ISO-3166-1 Alpha3 Country Codes = (http://metadata.ces.mil/mdr/ns/GPAS/codelist/iso3166-1/trigraph)

18.003_7

Field Name	*International Organization Name (ION)*
Description	The seventh information item is the international organization name / ION of the submitting organization. This is completed if record is not affiliated specifically with a country listed in the seventh information item. This optional information item is the name/acronym of organizations, and may be up to 100 alphanumeric and special characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 100
Char Types	U
Special Chars	n/a
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.004

Field Name	Source Agency (SRC)
Description	This is the identifier of the agency that actually created the record and supplied the information contained in it.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.005

Field Name	Number of Analyses Flag (NAL)
Description	This mandatory field indicates whether the DNA record contains multiple or single data analyses.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	NAL = 0 or 1
Look Up Codes	NUMBER OF ANALYSIS CODE: 0 = Multiple 1 = Single

18.006

Field Name	Sample Donor Information (SDI)
Description	This field is mandatory. It indicates if the DNA information is from the subject described in Record Type-2 or if it is from another person. Note that multiple Type-18 records may be included in a single transaction; only one record may have a value of 0.
Remarks	n/a
Format	n/a
Num Info Items	8
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-18 DNA Record

18.006_1

Field Name	*DNA Sample Donor (DSD)*
Description	The allowed numeric values for the first mandatory information item DNA sample donor / DSD.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	DSD = 0, 1 or 2
Look Up Codes	DNA SAMPLE DONOR CODE: 0 = Subject of the transaction 1 = Claimed, purported or validated relative 2 = Unknown source

18.006_2

Field Name	*Gender ID (GID)*
Description	The second information item is the gender ID / GID. This is an optional single character identifier of "M" or "F" or "U". "U" indicates unknown.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	GID = M, F or U
Look Up Codes	GENDER CODES: M = Male F = Female U = Unknown

18.006_3

Field Name	*Date of Last Contact (DLC)*
Description	The third information item, date of last contact / DLC is an optional date field. The local date is recorded as YYYYMMDD. Note that this may be a different date than the corresponding GMT, due to time zone differences.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	Encoding Specific
Look Up Codes	n/a

Type-18 DNA Record

18.006_4

Field Name	*Donor Date of Birth (DOB)*
Description	The fourth information item, date of birth / DOB, is an optional date field. The local date is recorded as YYYYMMDD. Note that this may be a different date than the corresponding GMT, due to time zone differences.
Remarks	n/a
Format	YYYYMMDD
Num Info Items	0
Num Chars	8 to 8
Char Types	N
Special Chars	None
Value Constraints	Encoding Specific
Look Up Codes	n/a

18.006_5

Field Name	*Ethnic Group (EGP)*
Description	The fifth information item is the ethnic group / EGP. It is an optional string of 50 alphanumeric and special characters used to describe the ethnic group to which the subject belongs.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.006_6

Field Name	*Dental Records Available (DRA)*
Description	The sixth information item is optional and indicates if dental records are available for the subject (dental records available / DRA). This information item shall be entered only if DSD=0.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	DRA = 0, 1 or 2 integer
Look Up Codes	DENTAL RECORD AVAILABLE INDICATION CODES: 0 = No 1 = Yes 2 = Unknown

Type-18 DNA Record

18.006_7

Field Name	*Sample Collection Location Description (LLC)*
Description	The seventh optional information item is the sample collection location description / LLC. It is an optional string of up to 4000 alphanumeric and special characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4,000
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.006_8

Field Name	*Sample Donor Status (SDS)*
Description	The eighth optional information item is the sample donor status / SDS. This information item will include whether or not the sample donor is deceased, missing or unknown.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	SDS = 0, 1 or 2 integer
Look Up Codes	SAMPLE DONOR STATUS CODE: 0 = Deceased 1 = Missing Person 2 = Unknown

18.007

Field Name	**Claimed Or Purported Relationship (COPR)**
Description	This field is mandatory if the value for [DNA Sample Donor / DSD] is equal to 1 [Claimed, purported or validated relative]. It is selected from [Table 76 Relationship Table]. It is a numeric value selected from the “Relationship code” column.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	1 <= COPR <= 7 positive integer
Look Up Codes	RELATIONSHIP CODES: 1 = Biological Child 2 = Biological Father 3 = Biological Mother 4 = Biological Sibling 5 = Maternal Relative 6 = Paternal Relative 7 = Other / Unknown

Type-18 DNA Record

18.008

Field Name	Validated Relationship (VRS)
Description	This field is optional and is a numeric value selected from the “Relationship Code” column of Table 76 [Relationship Table]. This information item is completed based upon a comparison of the subject’s DNA with the DNA of the person with whom the relationship is claimed or purported. It is only filled in if [Donor Status Description] DSD = 1 [Claimed or Purported Relationship].
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	1 <= VRS <= 7 positive integer
Look Up Codes	RELATIONSHIP CODES: 1 = Biological Child 2 = Biological Father 3 = Biological Mother 4 = Biological Sibling 5 = Maternal Relative 6 = Paternal Relative 7 = Other / Unknown

18.009

Field Name	Pedigree Information (PED)
Description	This optional field contains information and structure associated with the pedigree.
Remarks	n/a
Format	n/a
Num Info Items	7
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

18.009_1

Field Name	*Pedigree ID (PID)*
Description	The first information item is the pedigree ID / PID. It is an character string of up to 24 characters that is alphanumeric and allows special characters. It is mandatory if this field is used and it indicates the identity of the pedigree determined and held at the laboratory that originates the pedigree.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 24
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.009_2

Field Name	*Pedigree Member ID (PMI)*
Description	The second information item is the pedigree member ID / PMI. It is a unique reference within the pedigree. It is mandatory if this field is used. This information item refers to the subject of the transaction. It is an alphanumeric of up to 6 characters. This information item shall also provide the ability to link pedigree information.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 6
Char Types	U
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

18.009_3

Field Name	*Pedigree Member Status (PMS)*
Description	The third information item is the pedigree member status / PMS. It is mandatory if this field is used. It is a single-character. [This information item refers to DNA associated with this record]
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	PMS = K or U
Look Up Codes	PEDIGREE MEMBER STATUS CODES: K = Known U = Unknown

18.009_4

Field Name	*Sample Identifier (SID)*
Description	The fourth information item is the DNA sample identifier / SID for the transaction. It is not an identifier within the pedigree chain, unlike the following two identifiers or the PID. It is a character string of 24 characters or less. This information item relates the sample in this record to the pedigree.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 24
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.009_5

Field Name	*Father Identifier (FID)*
Description	The fifth information item is the father identifier / FID. It is optional and is a numeric value of 3 digits or less that is unique within the pedigree. This information item is the father identified as related to the sample indicated in the PMI item.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

18.009_6

Field Name	*Mother Identifier (MID)*
Description	The sixth information item is the mother identifier / MID. It is optional and is a numeric value of 3 digits or less that is unique within the pedigree. This information item is the mother identified as related to the sample indicated in the PMI item.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

18.009_7

Field Name	*Pedigree Comment (PCM)*
Description	The seventh optional information item is the pedigree comment / PCM. It is alphanumeric (up to 2000 characters).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2,000
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.010

Field Name	Sample Type (STY)
Description	This mandatory field contains two information items. The first represents the origination cell type from where the sample was collected (sample cellular type / SCT). The second information item is the sample origin / SMO. It is an optional item of a string of 2 characters describing where the sample was obtained.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

18.010_1

Field Name	*Sample Cellular Type (SCT)*
Description	The first [information item] represents the origination cell type from where the sample was collected (sample cellular type / SCT). It is mandatory and shall contain a numeric value selected from the 'Cellular code' column of Table 77.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= SCT <= 11 positive integer
Look Up Codes	DNA SAMPLE CELLULAR CODES: 0 = Blood 1 = Bone 2 = Co-mingled Biological Material 3 = Hair 4 = Saliva 5 = Semen 6 = Skin 7 = Sweat or Fingerprint 8 = Tissue 9 = Tooth 10 = Other 11 = Unknown

Type-18 DNA Record

18.010_2

Field Name	*Sample Origin (SMO)*
Description	The second information item is the sample origin / SMO. It is an optional item of a string of 2 characters describing where the sample was obtained.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 2
Char Types	A
Special Chars	None
Value Constraints	SMO = NS, WB or BP
Look Up Codes	SAMPLE ORIGIN CODES: NS = Not Specific WB = Whole Body BP = Body Part

18.011

Field Name	**Sample Typing Information (STI)**
Description	This mandatory field represents the technology utilized to type the DNA sample. A repeating subfield with the following information item shall comprise this field.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	SAMPLE TYPING AVAILABILITY CODES: 0 = Nuclear (indicates presence of Field 18.016: Autosomal STR, X-STR and YSTR profile / STR) 1 = mtDNA (indicates presence of Field 18.017: Mitochondrial DNA data / DMD) 2 = electropherogram data (indicates presence of Field 18.019: Electropherogram description / EPD) 3 = lectropherogram ladder (indicates presence of Field 18.023: Electropherogram ladder / EPL) 4 = user-defined profile (indicates the presence of Field 18.018: DNA userdefined profile / UDP)

18.012

Field Name	**Sample Collection Method (SCM)**
Description	This field contains a description of the method used to collect the DNA sample. It is a character string up to 255 characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 255
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.013

Field Name	Sample Collection Date (SCD)
Description	This mandatory field contains the date and time that the sample was collected. See [ANSI/NIST ITL 1-2011] Section 7.7.2.2 Coordinated universal time for details.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	15 to 15
Char Types	N
Special Chars	None
Value Constraints	Description points to 7.7.2.2 YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours format. Consider naming as "Sample Collection DateTime"
Look Up Codes	n/a

18.014

Field Name	Profile Storage Date (PSD)
Description	This mandatory field contains date and time the sample was collected. See [ANSI/NIST ITL 1-2011] Section 7.7.2.2 [Coordinated universal time for details.]
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	15 to 15
Char Types	N
Special Chars	None
Value Constraints	Description points to 7.7.2.2 YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours format. Consider naming as "PROFILE STORAGE DATETIME".
Look Up Codes	n/a

18.015

Field Name	DNA Profile Data (DPD)
Description	This is a mandatory field. It contains information and structure associated with the DNA profile data.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-18 DNA Record

18.015_1

Field Name	*Profile Type (PTP)*
Description	The first information item is mandatory. It is the profile type / PTP. It is a numerical value. Allowable values are 0 = Person or 1 = Stain.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	PTP = 0 or 1 integer
Look Up Codes	PROFILE CODES: 0 = Person 1 = Stain

18.015_2

Field Name	*Result (RES)*
Description	The second information item is optional and is the result / RES. It is entered with a numeric value selected from Table 78 [DNA Result Codes].
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= RES <= 10 integer
Look Up Codes	DNA RESULT CODES: 0 = Unable to process 1 = No hit 2 = Hit 3 = Hit, high/exact 4 = Hit, moderate 5 = Hit, low 6 = Additional Results/Details 7 = User defined 2 8 = User defined 3 9 = User defined 4 10 = User defined 5

18.015_3

Field Name	*Profile ID (PRF)*
Description	The third information item is mandatory and is the profile ID / PRF. It is a character string with a unique party identification. This information item is used to uniquely identify the profile or sample for which the transaction is based. It is a maximum of 64 alphanumeric characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.015_4

Field Name	*Supplemental Message (SUP)*
Description	The optional fourth information item is a supplemental message / SUP. This information item states if this transaction is a supplemental message to a previous transmission. It is an alphanumeric string containing up to 100 characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 100
Char Types	U
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

18.015_5

Field Name	*DNA Profile Comment (DPC)*
Description	The optional fifth information item is a DNA profile comment / DPC. It is an alphanumeric string containing up to 100 characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 100
Char Types	U
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

18.016

Field Name	**Autosomal STR, X-STR and Y-STR (STR)**
Description	This optional field may be comprised of as many subfields as there are combinations of data type and locus type reported. This field is only present if Field 18.011: Sample typing Information / STI has a subfield with the value 0.
Remarks	n/a
Format	n/a
Num Info Items	15
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-18 DNA Record

18.016_01

Field Name	*DNA STR Type (DST)*
Description	The first information item is mandatory. It is the DNA STR type / DST.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	DST = 0, 1 or 2 integer
Look Up Codes	DNA STR CODES: 0 = Autosomal STR Profile 1 = X-STR Profile 2 = Y-STR Profile

18.016_02

Field Name	*DNA Locus Reference (DLR)*
Description	The second information item is mandatory. It is the DNA locus reference / DLR. The current valid loci for Autosomal, Y and X-STRs are maintained by NIST and are available at http://www.nist.gov/itl/iad/ig/ansi_standard.cfm. This information item is an integer entry with up to 3 characters per locus.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= DLR <= 200 positive integer
Look Up Codes	n/a

18.016_03

Field Name	*Allele Indicator (ALL)*
Description	The third information item, allele indicator / ALL, is mandatory. It is a numeric entry containing a zero if no allele is found. Otherwise it is filled with a 1.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	ALL = 0 or 1 integer
Look Up Codes	n/a

Type-18 DNA Record

18.016_04

Field Name	*Locus Analysis Indicator (LAI)*
Description	The fourth information item is mandatory. It is the locus analysis indicator / LAI. It is a numeric entry, containing a zero if not analyzed. Otherwise it contains a 1.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	LAI = 0 or 1 integer
Look Up Codes	n/a

18.016_05

Field Name	*Precise Call Determination (PCDT)*
Description	The fifth information item is mandatory. It is the precise call determination / PCDT. It is a numeric entry containing a zero if the precise call cannot be determined, due to an uncertainty in the call. Otherwise it contains a 1.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	PCDT = 0 or 1 integer
Look Up Codes	n/a

18.016_06

Field Name	*Allele Call 1 (AL1)*
Description	The sixth information item is conditional upon the value of ALL being 1. It is the allele call 1 / AL1. This is the allele call for the locus reference DLR. It contains up to 4 characters, such as “11” or “23.3”
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	NS
Special Chars	Period
Value Constraints	integer > 0; or real number with one digit to right of decimal
Look Up Codes	n/a

Type-18 DNA Record

18.016_07

Field Name	*Allele Call 2 (AL2)*
Description	The seventh information item is conditional upon the value of ALL being 1. It is the allele call 2 / AL2. This is the allele call for the locus reference DLR. It contains up to 4 characters, such as “11” or “23.3” It shall appear if AL1 is used.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	NS
Special Chars	Period
Value Constraints	integer > 0; or real number with one digit to right of decimal
Look Up Codes	n/a

18.016_08

Field Name	*Allele Call 3 (AL3)*
Description	The eighth information item is optional but shall not appear unless ALL = 1. It is the allele call 3 / AL3. This is the allele call for the locus reference DLR. It contains up to 4 characters, such as “11” or “23.3”. This is not used for mixtures, but is for the rare case of a tri-allele. The information item allele call 3 / AL3 shall only appear if information items AL1 and AL2 are present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	NS
Special Chars	Period
Value Constraints	integer > 0; or real number with one digit to right of decimal
Look Up Codes	n/a

18.016_09

Field Name	*Batch ID (BID)*
Description	The ninth information item is the batch ID / BID. This optional information item shall contain an identifier for the batch to which a locus belongs. This may be referred to as the gel or place identifier. A specimen may have loci from multiple batches. The BID shall be an alphanumeric string up to 32 characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 32
Char Types	U
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.016_10

Field Name	*Electropherogram Cross Reference (ECR)*
Description	The tenth information item is optional. It is called the electropherogram cross reference / ECR and has the same value as the electropherogram image reference / EIR from the appropriate subfield of Field 18.019: Electropherogram description / EPD that is associated with the information in this field and particular subfield instance (if there is such an electropherogram present in this instance of the record).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.016_11

Field Name	*Ladder Cross Reference (LCR)*
Description	The eleventh information item is optional. It is called the ladder cross reference / LCR and has the same value as the ladder image reference / LIR from the appropriate subfield of Field 18.023: Electropherogram ladder / EPL that is associated with the information in this field and particular subfield instance (if there is such a ladder present in this instance of the record).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.016_12

Field Name	*Kit ID (KID)*
Description	The tenth information item is the kit ID / KID. This mandatory information item contains information describing the kit used to process the DNA. It is comprised of three mandatory information items. The values for these entries are contained in the list of kits maintained by NIST and is available at: http://www.nist.gov/itl/iad/ig/ansi_standard.cfm. This information item's data shall describe a Kit aligned with the DNA Profile data in this record. If a nonlisted kit is used, then the eleventh, twelfth and thirteenth information items are mandatory and the KID value shall be “Non-listed kit”.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	0 <= KID <= 999; integer
Look Up Codes	DNA KIT ID LIST (NORMATIVE): http://www.nist.gov/itl/iad/ig/ansi_standard.cfm = DNA kit ID list (Normative) information

Type-18 DNA Record

18.016_13

Field Name	*Kit Name (KNM)*
Description	The eleventh information item is the kit name / KNM. This is an alphanumeric value of up to 32 characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 32
Char Types	U
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

18.016_14

Field Name	*Manufacturer (KMF)*
Description	The twelfth information item is the manufacturer / KMF. This is an alphanumeric value of up to 32 characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 32
Char Types	U
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

18.016_15

Field Name	*Description of the Kit (with part or catalog number) (KDS)*
Description	The thirteenth information item is the description of the kit (with part or catalog number) / KDS. This is an alphanumeric value of up to 128 characters, with special characters allowed (ANS).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 128
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.017

Field Name	Mitochondrial DNA Data (DMD)
Description	To accommodate the differences in how mtDNA types are derived (differences from reference), the interpretation issue is avoided in this standard by dividing the control region into 2 regions (even though HV3 exists) to ensure any insertions / deletions/ Cstretches are included. This method enables any receiver of the data to use it in a way to which they are accustomed (either using the full sequence or interpreting the full sequence according to their own methodology). The resultant data use would then be fully consistent with the receiver's database and enable processing. This is an optional field, but if it is entered, all information items are mandatory. This field is only present if Field 18.011: Sample typing Information / STI has a subfield with the value 1.
Remarks	n/a
Format	n/a
Num Info Items	8
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

18.017_1

Field Name	*Mito Control Region 1 (MT1)*
Description	The first information item is the mito control region 1 / MT1. It is defined as inclusive of HV1, starting at 16024 and ending at 16569. The string shall be 646 characters. This string length allows for insertions. Each character is an IUPAC value from Table 79 or a sequence value: A, G, C or T.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	546 to 646
Char Types	AS
Special Chars	Comma
Value Constraints	character string from Lookup Codes or a sequence value: A, G, C or T
Look Up Codes	DNA SEQUENCE VALUE: A = A G = G C = C T = T IUPAC DNA CODES: R = G, A Y = T, C M = A, C K = G, T S = G, C W = A, T H = A, C, T B = G, T, C V = G, C, A D = G, A, T N = G, A, T, C - = Deletion

Type-18 DNA Record

18.017_2

Field Name	*Mito Control Region 2 (MT2)*
Description	The second information item is the mito control region 2 / MT2 is defined as inclusive of HV2 and HV3, starting at 1 and ending at 576. Each character is an IUPAC value from Table 79.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	576 to 976
Char Types	AS
Special Chars	Comma
Value Constraints	character string from Lookup Codes or a sequence value: A, G, C or T
Look Up Codes	IUPAC DNA CODES: R = G, A Y = T, C M = A, C K = G, T S = G, C W = A, T H = A, C, T B = G, T, C V = G, C, A D = G, A, T N = G, A, T, C - = Deletion

18.017_3

Field Name	*Base Composition Starting Point (BSP)*
Description	The third information item is the base composition starting point / BSP. This entry is numeric, up to 5 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

18.017_4

Field Name	*Base Composition Ending Point (BEP)*
Description	The fourth information item is the base composition ending point / BEP. This entry is numeric, up to 5 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer; BEP > BSP
Look Up Codes	n/a

Type-18 DNA Record

18.017_5

Field Name	*Base Composition A Length (BCA)*
Description	The fifth information item is the base composition A length / BCA. It is a numerical value of two digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

18.017_6

Field Name	*Base Composition G Length (BCG)*
Description	The sixth information item is the base composition G length / BCG. It is a numerical value of two digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

18.017_7

Field Name	*Base Composition C Length (BCC)*
Description	The seventh information item is the base composition C length / BCC. It is a numerical value of two digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

18.017_8

Field Name	*Base Composition T Length (BCT)*
Description	The eighth information item is the base composition T length / BCT. It is a numerical value of two digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-18 DNA Record

18.018

Field Name	DNA User-Defined Profile (UDP)
Description	This optional field is user-defined, when data other than Autosomal STR, X-STR, Y-STR, mtDNA or an electropherogram is included as part of the transaction. The sender shall provide the receiver with a description of the field contents. This field is only present if Field 18.011: Sample typing Information / STI has a subfield with the value 4.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

18.019

Field Name	Electropherogram Description (EPD)
Description	This optional field contains a subfield for each electropherogram. This field is only present if Field 18.011: Sample typing Information / STI has a subfield with value 2.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

18.019_1

Field Name	*Electropherogram Image Reference (EIR)*
Description	The first information item is the electropherogram image reference / EIR. It shall contain an alphanumeric reference up to 8 characters, which is unique for each image. If none has been assigned, enter 999.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	U
Special Chars	Any
Value Constraints	If none assigned enter 999
Look Up Codes	n/a

Type-18 DNA Record

18.019_2

Field Name	*Electropherogram Storage Type (EST)*
Description	The second information item is the electropherogram storage type / EST. This is a character string of up to 4 characters, representing the file type suffix for the electropherogram. The data is stored in “fsa”, “hid” or “----” The dashes may be substituted with character strings for other format types as they become available.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	U
Special Chars	n/a
Value Constraints	“fsa”, “hid” or “----”, dashes may be substituted with character strings for other format types as they become available.
Look Up Codes	n/a

18.019_3

Field Name	*Image Data Descriptor (IDD)*
Description	The third information item is the image data descriptor / IDD of the electropherogram contained in this subfield. If the data is stored externally, enter the filename. This is an alphanumeric string with special characters allowed.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 200
Char Types	U
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

18.019_4

Field Name	*Electropherogram Data (ELPD)*
Description	The fourth information item is the electropherogram data/ ELPD. This shall be stored in base-64 format.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to -
Char Types	Base64
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-18 DNA Record

18.019_5

Field Name	*Electropherogram Screenshot (EPS)*
Description	The fifth information item is optional. It is the electropherogram screenshot / EPS. This may be an image captured during the analysis. This shall be stored in base-64 format.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to -
Char Types	Base64
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

18.020

Field Name	**DNA Genotype Distribution (DGD)**
Description	This field contains informative genotype representation type of DNA information. It is an optional field. The entry is numeric: 0 = Likelihood 1 = Probability
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	DGD = 0 or 1 integer
Look Up Codes	DNA GENOTYPE DISTRIBUTION CODES: 0 = Likelihood 1 = Probability

18.021

Field Name	**DNA Genotype Allele Pair (GAP)**
Description	This field is only present if Field 18.020: DNA Genotype Distribution / DGD has a value. It is used for low-template, mixture or stain scenarios only. It is comprised of a repeating subfield that occurs once for each allele pair. Allele calls are captured in Field 18.016: Autosomal STR, X-STR and Y-STR profile / STR.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-18 DNA Record

18.021_1

Field Name	*Genotype Locus Reference (GLR)*
Description	The first information item is the genotype locus reference / GLR. The current valid loci for Autosomal, Y and X-STRs are maintained by NIST and are available at http://www.nist.gov/itl/iad/ig/ansi_standard.cfm . The GLR is a numeric entry with up to 3 characters per locus.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= GLR <= 200; positive integer
Look Up Codes	DNA LOCI (NORMATIVE) AT LINK: http://www.nist.gov/itl/iad/ig/ansi_standard.cfm = DNA Loci (Normative) information

18.021_2

Field Name	*Allele Pair (ALP)*
Description	The second information item is the allele pair / ALP. This is a numeric information item containing the allele pair data of up to 9 numeric characters separated by a comma between values. An example is “14,23.3” or “22.1,23.3”
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 20
Char Types	NS
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

18.021_3

Field Name	*Genotype Numerical Weight (GNW)*
Description	The third information item is the genotype numerical weight / GNW. It is a non-negative real number up to 5 characters ranging from 0 to 1. An example is “0.114”.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	NS
Special Chars	Period
Value Constraints	0 <= GNW <=1; non-negative real number up to 5 characters, which may have a period
Look Up Codes	n/a

Type-18 DNA Record

18.022

Field Name	Comment (COM)
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.023

Field Name	Electropherogram Ladder (EPL)
Description	This optional field contains a repeating subfield for a ladder / control sample. This field is only present if Field 18.011: Sample typing Information / STI has a subfield with the value 3.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

18.023_1

Field Name	*Ladder Image Reference (LIR)*
Description	The first information item is the ladder image reference / LIR. It shall contain an alphanumeric reference up to 8 characters, which is unique for each image. If none has been assigned, enter 999. This is a unique identifier.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	U
Special Chars	n/a
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.023_2

Field Name	*Ladder Storage Type (LST)*
Description	The second information item is the ladder storage type / LST. This is a string of up to 4 characters, representing the file type suffix for the electropherogram. The data is stored in “fsa”, “hid” or “----“ The dashes may be substituted with character strings for other format types as they become available.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 4
Char Types	U
Special Chars	n/a
Value Constraints	None
Look Up Codes	n/a

18.023_3

Field Name	*Ladder Image Data Descriptor (LDD)*
Description	The third information item is the ladder image data descriptor / LDD of the electropherogram contained in this subfield. If the data is stored externally, enter the filename. This is an alphanumeric string with special characters allowed. An example is “NIST Run 5 Well A07 12 Jan 11”
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 200
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.023_4

Field Name	*Ladder Electropherogram Data (LEPD)*
Description	The fourth information item is the ladder electropherogram data/ LEPD. This shall be stored in base-64 format.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to -
Char Types	Base64
Special Chars	n/a
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.023_5

Field Name	*Ladder Electropherogram Screenshot (LES)*
Description	The fifth information item is optional. It is the ladder electropherogram screenshot / LES. This may be an image captured during the analysis. This shall be stored in base-64 format.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to -
Char Types	Base64
Special Chars	n/a
Value Constraints	None
Look Up Codes	n/a

18.200-18.900

Field Name	**User Defined Fields (UDF)**
Description	These are fields currently not described by the specification. Prior using these fields, coordination is required with the standard development body.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

18.902

Field Name	**Annotation Information (ANN)**
Description	This optional field is used to store annotation, logging, or processing information associated with one or more processing algorithms or latent workstations (other than the FBI developed ULW).
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-18 DNA Record

18.902_1

Field Name	*Greenwich Mean Time (GMT)*
Description	This field provides a mechanism for expressing the date and time in terms of universal Greenwich Mean Time (GMT) units. This time is independent of the actual time zone where the time and date is recorded. The data is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	n/a
Format	YYYYMMDDHHMMSSZ - for Traditional Encoding
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

18.902_2

Field Name	*Processing Algorithm Name / Version (NAV)*
Description	This field shall contain an unformatted text string of up to 64 characters identifying the name and version of the processing algorithm or workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.902_3

Field Name	*Algorithm Owner (OWN)*
Description	The third information item Type-9 Annotated Information field shall contain an unformatted text string of up to 64 characters with the contact information for the organization that owns the processing algorithm or latent workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.902_4

Field Name	*Process Description (PRO)*
Description	The fourth and final information item of the Type-9 Annotated Information field shall contain an unformatted text string of up to 255 characters describing a process or procedure applied to the sample in this Type-XX record.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 255
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.993

Field Name	**Source Agency Name (SAN)**
Description	This is an optional field. It may contain up to 125 Unicode characters. It is the name of the agency referenced in Field xx.004: Source agency / SRC for record types 9-99.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 125
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.995

Field Name	**Associated Context (ASC)**
Description	Optional field xx.995 is contained in biometric data sample Record Types 10 and above that may have instances of Record Type-21 linked to it. Record Type-21 stores images and/or recordings that are not the actual source of the biometric data contained in another Record Type, but do show the context of the biometric data. An example would be a photograph of a glass that had latent prints on it. The actual image of the latent prints would appear in a Type-20 record, with the segmented individual images appearing in Type-13 records. This field consists of a maximum of 255 repeating subfields, each of which contains two information items, as described below. This is because there may be multiple instances of associated context records associated with a single biometric sample.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-18 DNA Record

18.995_1

Field Name	*Associated Context Number (ACN)*
Description	The first information item for the Associated Context field for a particular Record Type-21. This is mandatory for each Field xx.995, when the field is used. It contains an index to a particular instance of a Type-21 record in the transaction. This same index value appears in the appropriate instance of Record Type-21 as Field 21.021: Associated context number / ACN. The value of the ACN shall be a sequentially assigned a positive integer starting from one and incremented by one, not toexceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= ACN <= 255; positive integer
Look Up Codes	n/a

18.995_2

Field Name	*Associated Segment Position (ASP)*
Description	The first information item is the associated segment position / ASP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= ASP <= 99; positive integer
Look Up Codes	n/a

18.998

Field Name	**Geographic Sample Acquisition Location (GEO)**
Description	This field contains the location where the sample/original source/context information was acquired – not where it is stored.
Remarks	n/a
Format	n/a
Num Info Items	15
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-18 DNA Record

18.998_01

Field Name	*Universal Time Entry (UTE)*
Description	The coordinated universal time (UTC) where the biometric sample was collected. This time is independent of the actual time zone where the time and date is recorded. The date is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	If sample collection time is unknown, set it to "00000000000000Z."
Format	n/a
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

18.998_02

Field Name	*Latitude Degree Value (LTD)*
Description	The second information item is latitude degree value / LTD. This is a value that specifies the degree of latitude. The value shall be between -90 (inclusive) and +90 (inclusive). The degrees may be expressed as an integer (without a decimal) or a real number including decimals. If decimals are present, then minutes and seconds shall be empty. Examples: Buenos Aires, Argentina: -34 (with minutes LTM = 36) NIST, Gaithersburg, Maryland: 39.137627 (no LTM or LTS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 9
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-90 <= LTD <= 90
Look Up Codes	n/a

18.998_03

Field Name	*Latitude Minute Value (LTM)*
Description	The third information item is latitude minute value / LTM. This is a value that specifies a minute of a degree. The value shall be between 0 (inclusive) to 60 (exclusive). The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall be empty. The minute value is empty, even if the degree value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTM < 60
Look Up Codes	n/a

Type-18 DNA Record

18.998_04

Field Name	*Latitude Second Value (LTS)*
Description	The fourth information item is the latitude second value / LTS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTS < 60
Look Up Codes	n/a

18.998_05

Field Name	*Longitude Degree Value (LGD)*
Description	The fifth information item is the longitude degree value / LGD. It is a value that specifies the degree of a longitude. The value shall be between -180 (inclusive) and +180 (inclusive). If LTD is present, then LGD shall be present.The degrees may be expressed as whole numbers (without a decimal) or real numbers including decimals. If decimals are present, then minutes and seconds are empty. Examples: Buenos Aires, Argentina: -58 (with minutes LGM = 22) NIST, Gaithersburg, Maryland: -77.216032 (no LGM or LGS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-180 <= LGD <= 180
Look Up Codes	n/a

18.998_06

Field Name	*Longitude Minute Value (LGM)*
Description	The sixth information item is the longitude minute value / LGM. It is a value that specifies a minute of a degree. The value shall be from 0 (inclusive) to 60 (exclusive).The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall not appear. The minute value is empty, even if the degree value is an integer. If LTM is present, then LGM shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGM < 60
Look Up Codes	n/a

Type-18 DNA Record

18.998_07

Field Name	*Longitude Second Value (LGS)*
Description	The seventh information item is the longitude second value / LGS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer. If LTS is present, then LGS shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGS < 60
Look Up Codes	n/a

18.998_08

Field Name	*Elevation (ELE)*
Description	
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Minus Sign,Period
Value Constraints	-422.000 < ELE < 8848.000; real number
Look Up Codes	n/a

Type-18 DNA Record

18.998_09

Field Name	*Geodetic Datum Code (GDC)*
Description	The ninth information item is the geodetic datum code / GDC11. It is an alphanumeric value of 3 to 6 characters in length. This information item is used to indicate which coordinate system was used to represent the values in information items 2 through 7. If no entry is made in this information item, then the basis for the values entered in the first eight information items shall be WGS84, the code for the World Geodetic Survey 1984 version - WGS 84 (G873). See look up codes for values.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 6
Char Types	AN
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	GEOGRAPHIC COORDINATE DATUM CODES: AIRY = Airy AUST = Australian National BES = Bessel 1841 BESN = Bessel 1841 (Nambia) CLK66 = Clarke 1866 CLK80 = Clarke 1880 EVER = Everest FIS60 = Fischer 1960 (Mercury) FIS68 = Fischer 1968 GRS67 = GRS 1967 GRS80 = GRS 1980 HELM = Helmert 1906 HOUG = Hough INT = International KRAS = Krassovsky AIRYM = Modified Airy EVERM = Modified Everest FIS60M = Modified Fischer 1960 SA69 = South American 1969 WGS60 = WGS-60 WGS66 = WGS-66 WGS72 = WGS-72 WGS84 = WGS-84 / NAD-83 Other = <entry up to 6 characters>

18.998_10

Field Name	*Geographic Coordinate Universal Transverse Mercator Zone (GCM)*
Description	It is an alphanumeric value of 2 to 3 characters. This is a one or two digit UTM zone number followed by the 8 degree latitudinal band designator (which is a single letter).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	AN
Special Chars	None
Value Constraints	One or two digit UTM zone
Look Up Codes	n/a

Type-18 DNA Record

18.998_11

Field Name	*Geographic Coordinate Universal Transverse Mercator Easting (GCE)*
Description	The eleventh information item is the geographic coordinate universal transverse Mercator easting / GCE. It is an integer of 1 to 6 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 6
Char Types	N
Special Chars	None
Value Constraints	0 <= GCE; integer
Look Up Codes	n/a

18.998_12

Field Name	*Geographic Coordinate Universal Transverse Mercator Northing (GCN)*
Description	The twelfth information item is the geographic coordinate universal transverse Mercator northing / GCN. It is an integer of 1 to 8 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	N
Special Chars	None
Value Constraints	0 <= GCN; integer
Look Up Codes	n/a

18.998_13

Field Name	*Geographic Reference Text (GRT)*
Description	It is a free form text describing a street address or other physical location (such as ‘Corner of Washington and Madison, Geneva, NY’).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 150
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-18 DNA Record

18.998_14

Field Name	*Geographic Coordinate Other System Identifier (OSI)*
Description	A fourteenth optional information item geographic coordinate other system identifier / OSI allows for other coordinate systems. This information items specifies the system identifier. It is up to 10 characters in length. Examples are: • MGRS (Military Grid Reference System) • USNG (United States National Grid) • GARS (Global Area Reference System) • GEOREF (World Geographic Reference) • LANDMARK landmark (e.g. hydant) and position relative to the landmark.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.998_15

Field Name	*Geographic Coordinate Other System Value (OCV)*
Description	A fifteenth optional information item, is the geographic coordinate other system value / OCV. It shall only be present if OSI is present in the record. It can be up to 126 characters in length. If OSI is LANDMARK, OCV is free text and may be up to 126 characters. For details on the formatting of OCV for the other coordinate systems shown in OSI as examples, see http://earth-info.nga.mil/GandG/coordsys/grids/referencesys.html .
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

18.XXX

Field Name	**Reserved for Future Use only by ANSI/NIST-ITL ()**
Description	These Field IDs listed are reserved for future version of ANSI/NIST ITL use. These Field IDs are not for local use.
Remarks	18.024-199,901,903-992,994,996-997,999
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-20 Source Representation Record

20.001

Field Name	Record Header (LEN - for Traditional Encoding only)
Description	The record header appears as the first field (xx.001) in each Record Type. It contains information particular to the encoding format chosen, in order to enable proper reading of the record. In Traditional encoding, this field contains the record length in bytes (including all information separators). In NIEM-conformant XML encoding, this field contains the RecordCategoryCode, which is the numeric representation of the Record Type.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	N
Special Chars	None
Value Constraints	n/a
Look Up Codes	n/a

20.002

Field Name	Information Designation Character (IDC)
Description	Each of the records present in a transaction, with the exception of the Type-1 record, shall include a field (xx.002) containing the information designation character / IDC. The value of the IDC shall be a sequentially assigned positive integer starting from zero and incremented by one up to a maximum of 99. IDC references are stated in Type-1 Field 1.003 Transaction content / CNT and shall be used to relate information items in the CNT field of the Type-1 record to the other records in the transaction. Two or more records may share a single IDC solely to identify and link together records that pertain to different representations of the same biometric trait.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= IDC <= 99 integer
Look Up Codes	n/a

20.003

Field Name	SRN Cardinality (CAR)
Description	This mandatory field indicates how this record is being used. It describes the cardinality: one to one (S), one to many (D), or many-to-one (M) of how the source representation record relates to other record(s) within the transaction.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	A
Special Chars	None
Value Constraints	CAR = S, D, or M
Look Up Codes	CAR VALUE: S = The representation in this Type-20 record is the source of another Type-20 record D = The representation in this Type-20 record is the source of one or more biometric type records, Excluding Type-4 and Type-9, which have been derived from it M = A single biometric type record, excluding Type-4 and Type-9, has been prepared from multiple Type-20 records

Type-20 Source Representation Record

20.004

Field Name	Source Agency (SRC)
Description	This is the identifier of the agency that actually created the record and supplied the information contained in it.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.005

Field Name	Source Representation Date (SRD)
Description	This optional field shall contain the local date and time that the source representation contained in the record was captured.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	12 to 12
Char Types	N
Special Chars	None
Value Constraints	YYYYMMDDhhmm
Look Up Codes	n/a

20.006

Field Name	Horizontal Line Length (HLL)
Description	HLL defines the number of pixels contained on a single horizontal line of the image. The maximum horizontal size is limited to 65,535 pixels in Record Types-4 and 8, and to 99,999 for other record types. The minimum value is 10 pixels. The total image size (HLL times VLL) must be able to be accommodated in Field xx.001 for Traditional encoding.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 5
Char Types	N
Special Chars	None
Value Constraints	10 <= HLL <= 99999 positive integer
Look Up Codes	n/a

Type-20 Source Representation Record

20.007

Field Name	Vertical Line Length (VLL)
Description	VLL defines the number of horizontal lines contained in the image. The maximum vertical size is limited to 65,535 pixels in Record Types-4 and 8, and to 99,999 for other record types. The minimum value is 10 pixels.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 5
Char Types	N
Special Chars	None
Value Constraints	10 <= VLL <= 99999 positive integer
Look Up Codes	n/a

20.008

Field Name	Scale Units (SLC)
Description	The image sampling frequency (pixel density). A value of “1” shall indicate pixels per inch. A value of “2” shall indicate pixels per centimeter. A value of “0” in this field indicates that no scale is provided, and the quotient of THPS/TVPS shall provide the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1
Char Types	N
Special Chars	None
Value Constraints	SLC = 0, 1 or 2 integer
Look Up Codes	SCALE UNIT CODES: 1 = Pixels Per Inch 2 = Pixels Per Centimeter 0 = No Scale

20.009

Field Name	Transmitted Horizontal Pixel Scale (THPS)
Description	This is the integer pixel density used in the horizontal direction of the image if SLC has a value of “1” or “2”. If SLC has a value of “0”, this information item shall contain the horizontal component of the pixel aspect ratio, up to 5 integer digits. For example, if the SLC value = 1, then the value of THPS could be ‘1000’ for a 1000 ppi sensor.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-20 Source Representation Record

20.010

Field Name	Transmitted Vertical Pixel Scale (TVPS)
Description	This is the integer pixel density used in the vertical direction of the image if SLC has a value of “1” or “2”. If SLC has a value of “0”, this information item shall contain the vertical component of the pixel aspect ratio, up to 5 integer digits. If SLC is 1 or 2, then TVPS shall equal THPS.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

20.011

Field Name	Compression Algorithm (CGA)
Description	This is a mandatory field. It shall specify the algorithm used to compress the transmitted color or grayscale images.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 5
Char Types	AN
Special Chars	None
Value Constraints	value from Image Compression Algorithm Type
Look Up Codes	IMAGE COMPRESSION ALGORITHM CODES: NONE = Uncompressed WSQ20 = WSQ Version 2.0 JPEGB = JPEG ISO/IEC 10918 (Lossy) JPEGL = JPEG ISO/IEC 10918 (Lossless) JP2 = JPEG 2000 ISO/IEC 15444-1 (Lossy) JP2L = JPEG 2000 ISO/IEC 15444-1 (Lossless) PNG = Portable Network Graphics

20.012

Field Name	Bits Per Pixel (BPX)
Description	This ASCII field shall contain the number of bits used to represent a pixel. This field shall contain an entry of “8” for normal grayscale values of “0” to “255” or each RGB color component. Any entry in this field greater than “8” shall represent a grayscale or color pixel component with increased precision.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-20 Source Representation Record

20.013

Field Name	Color Space (CSP)
Description	It shall contain an entry from the lookup codes below.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 4
Char Types	A
Special Chars	None
Value Constraints	See Lookup Codes
Look Up Codes	COLOR SPACE CODES: UNK = Undefined GRAY = Grayscale (monochrome) RGB = Undetermined color space for an RGB image SRGB = SRGB (IEC 61966-2-1) YCC = YCbCr (legacy) SYCC = YCbCr (JPEG 2000 compressed)

20.014

Field Name	Acquisition Source (AQS)
Description	This mandatory field shall specify and describe the acquisition source. The information items may be repeated for up to 9 sources.
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-20 Source Representation Record

20.014_1

Field Name	*Acquisition Source Type (AQT)*
Description	The first information item, Acquisition source type / AQT, is mandatory and it shall be a numeric entry selected from the “attribute code’ column of ANSI/NIST-ITL 1-2011(Table 83) Acquisition source.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	See Lookup Codes
Look Up Codes	ACQUISITION SOURCE: 0 = Unspecified or unknown 1 = Static digital image from an unknown source 2 = Static digital image from a digital still-image camera 3 = Static digital image from a scanner 4 = Single video frame from an unknown source 5 = Single video frame from an analog video camera 6 = Single video frame from a digital video camera 7 = Video sequence from an unknown source 8 = Video sequence from an analog video camera, stored in analog format 9 = Video sequence from an analog video camera, stored in digital format 10 = Video sequence frame from a digital video camera 11 = Computer screen image capture 12 = Analog audio recording device; stored in analog form (such as a phonograph record) 13 = Analog audio recording device; converted to digital 14 = Digital audio recording device 15 = Landline telephone – both sender and receiver 16 = Mobile telephone – both sender and receiver 17 = Satellite telephone – both sender and receiver 18 = Telephone – unknown or mixed sources 19 = Television – NSTC 20 = Television – PAL 21 = Television - Other 22 = Voice-over-internet protocol (VOIP) 23 = Radio transmission: short-wave (specify single side band or continuous wave in FDN) 24 = Radio transmission: amateur radio (specify lower side band or continuous wave in FDN) 25 = Radio transmission: FM (87.5 MHz to 108 MHz) 26 = Radio transmission: long-wave (150 kHz to 519 kHz) 27 = Radio transmission: AM (570 kHz to 1720 kHz) 28 = Radio transmission: Aircraft frequencies 29 = Radio transmission: Ship and coastal station frequencies 30 = Vendor specific capture format 31 = Other

20.014_2

Field Name	*Analog to Digital Conversion (A2D)*
Description	The second information item is mandatory if the acquisition source is analog, and the data is stored in digital format. It is a text field, analog to digital conversion / A2D, that describes the analog to digital equipment used to store a representation of the source. This field should address parameters used, such as sample rate, if known.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 200
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-20 Source Representation Record

20.014_3

Field Name	*Radio Transmission Format Description (FDN)*
Description	The third information item is mandatory if the AQT is 23 or 24. It is a text field, radio transmission format description / FDN. It is optional for other radio transmission codes.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 200
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.014_4

Field Name	*Acquisition Special Characteristics (AQSC)*
Description	The fourth information item is optional. It is a free text field, acquisition special characteristics / AQSC that is used to describe any specific conditions not mentioned in the [Acquisition Source] table. An example would be a near-infrared camera outputting images in visible wavelengths.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 200
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.015

Field Name	**Source Representation Format (SFT)**
Description	This is a mandatory field comprised of two information items.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-20 Source Representation Record

20.015_1

Field Name	*File Type (FTY)*
Description	The first information item is mandatory. It is file type / FTY. If the source representation is a digital file, this shall contain the suffix indicating the file type (such as JPG). If it is an analog file, enter 'ANALOG'. For digital data stored in other formats (such as digital tape), enter 'OTHER'.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 6
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.015_2

Field Name	*Decoding Instructions (DEI)*
Description	The second information item is decoding instructions / DEI. It is optional and contains free text up to 1000 characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1,000
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.016

Field Name	**Segments (SEG)**
Description	This optional field shall consist of a subfield for each segment to be defined. Each subfield consists of a series of information items.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-20 Source Representation Record

20.016_1

Field Name	*Reference Segment Position (RSP)*
Description	The first information item is the reference segment position / RSP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= RSP <= 99 positive integer
Look Up Codes	n/a

20.016_2

Field Name	*Internal File Reference Pointer (IPT)*
Description	The second information item is the internal file reference pointer/ IPT. It is set to 0 if the source representation is a single file. If the external file referenced in External file reference / EFR is a PDF, video, or presentation file, or has multiple locations where a sample may be located, this information item is the reference to the particular instance, such as page, video frame, or slide number used to derive the image transmitted in other record types. If a particular frame is chosen and there is no further image segmentation needed, the following information items shall not be used.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 15
Char Types	ANS
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.016_3

Field Name	*Number of Points (NOP)*
Description	Specifies the number of vertices.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	3 <= NOP <= 99 positive integer
Look Up Codes	n/a

Type-20 Source Representation Record

20.016_4

Field Name	*Horizontal Point Offset (HPO)*
Description	The pixel counts to the right.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= HPO <= HLL positive integer
Look Up Codes	n/a

20.016_5

Field Name	*Vertical Point Offset (VPO)*
Description	The pixel counts down from the origin.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	0 <= VPO <= VLL positive integer
Look Up Codes	n/a

20.017

Field Name	**Scanned Horizontal Pixel Scale (SHPS)**
Description	This ASCII field shall specify the horizontal pixel density used for scanning providing the SLC field contains a "1" or a "2". Otherwise, it indicates the horizontal component of the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

20.018

Field Name	**Scanned Vertical Pixel Scale (SVPS)**
Description	This ASCII field shall specify the vertical pixel density used for scanning providing the SLC field contains a "1" or a "2". Otherwise, it indicates the vertical component of the pixel aspect ratio.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-20 Source Representation Record

20.019

Field Name	Time Index (TIX)
Description	This is a conditional field. If the record contains video or audio, it shall contain the start and end times of segments within the file.For Type-20 or Type-21 records containing video or audio, this field shall contain two information items, time index start /TIS and time index end / TIE for the start and end times of segments within a video or audio file, measured in hh:mm:ss.sss where ss.sss refers to the seconds and milliseconds. This field is comprised of one or more subfields. Each repeating subfield corresponds to a single segment, with a starting and end time as separate information items.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

20.019_1

Field Name	*Time Index Start (TIS)*
Description	For Type-20 or Type-21 records containing video or audio, this information item of the Time Index field shall contain the start times of segments within a video or audio file, measured in hh:mm:ss.sss where ss.sss refers to the seconds and milliseconds.
Remarks	n/a
Format	hh:mm:ss.sss where ss.sss refers to the seconds and milliseconds
Num Info Items	0
Num Chars	12 to 12
Char Types	NS
Special Chars	Colon,Period
Value Constraints	TIS >= 0
Look Up Codes	n/a

20.019_2

Field Name	*Time Index End (TIE)*
Description	For Type-20 or Type-21 records containing video or audio, this information item of the Time Index field shall contain the end times of segments within a video or audio file, measured in hh:mm:ss.sss where ss.sss refers to the seconds and milliseconds.
Remarks	n/a
Format	hh:mm:ss.sss where ss.sss refers to the seconds and milliseconds
Num Info Items	0
Num Chars	12 to 12
Char Types	NS
Special Chars	Colon,Period
Value Constraints	TIE > TIS
Look Up Codes	n/a

Type-20 Source Representation Record

20.020

Field Name	Comment (COM)
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.021

Field Name	Source Representation Number (SRN)
Description	This is the first information item and is mandatory for each Field xx.997. It contains an index to a particular instance of a Type-20 record in the transaction. This same index value appears in the appropriate instance of Record Type-20 as Field 20.021: Source representation number / SRN. The value of the SRN shall be a sequentially assigned a positive integer starting from one and incremented by one, not to exceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= SRN <= 255 positive integer
Look Up Codes	n/a

20.100-20.900

Field Name	User Defined Fields (UDF)
Description	These are fields currently not described by the specification. Prior using these fields, coordination is required with the standard development body.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	See Field 20.100-20.900
Look Up Codes	n/a

Type-20 Source Representation Record

20.902

Field Name	Annotation Information (ANN)
Description	This optional field is used to store annotation, logging, or processing information associated with one or more processing algorithms or latent workstations (other than the FBI developed ULW).
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

20.902_1

Field Name	*Greenwich Mean Time (GMT)*
Description	This field provides a mechanism for expressing the date and time in terms of universal Greenwich Mean Time (GMT) units. This time is independent of the actual time zone where the time and date is recorded. The data is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	n/a
Format	YYYYMMDDHHMMSSZ - for Traditional Encoding
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

20.902_2

Field Name	*Processing Algorithm Name / Version (NAV)*
Description	This field shall contain an unformatted text string of up to 64 characters identifying the name and version of the processing algorithm or workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-20 Source Representation Record

20.902_3

Field Name	*Algorithm Owner (OWN)*
Description	The third information item Type-9 Annotated Information field shall contain an unformatted text string of up to 64 characters with the contact information for the organization that owns the processing algorithm or latent workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.902_4

Field Name	*Process Description (PRO)*
Description	The fourth and final information item of the Type-9 Annotated Information field shall contain an unformatted text string of up to 255 characters describing a process or procedure applied to the sample in this Type-XX record.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 255
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.903

Field Name	**Device Unique Identifier (DUI)**
Description	The DUI shall contain a string uniquely identifying the device or source of the data. This field shall be one of: • Host PC MAC address, identified by the first character “M”, or • Host PC processor ID, identified by the first character “P”.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	13 to 16
Char Types	ANS
Special Chars	Any
Value Constraints	first character = M or P
Look Up Codes	n/a

Type-20 Source Representation Record

20.904

Field Name	Make/Model/Serial Number (MMS)
Description	The MMS contains the make, model and serial number for the capture device. It shall consist of three information items. Each information item shall be 1 to 50 characters. Any or all information items may indicate that information is unknown with the value “0”.
Remarks	n/a
Format	n/a
Num Info Items	3
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

20.904_1

Field Name	*Make (MAK)*
Description	The name of the manufacturer for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.904_2

Field Name	*Model (MOD)*
Description	The model number for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.904_3

Field Name	*Serial Number (SER)*
Description	The serial number for the capture device.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 50
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-20 Source Representation Record

20.993

Field Name	Source Agency Name (SAN)
Description	This is an optional field. It may contain up to 125 Unicode characters. It is the name of the agency referenced in Field xx.004: Source agency / SRC for record types 9-99.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 125
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.994

Field Name	External File Reference (EFR)
Description	This conditional field shall be used to enter the URL / URI or other unique reference to a storage location for all associated context files EXCEPT 2D still images. If this field is used, Field 21.999: Associated context data / DATA shall not be set. However, one of the two fields shall be present in all instances of this record type. It is an alphanumeric entry, with special characters allowed. A non-URL reference might be similar to: “Case 2009:1468 AV Tape 5”.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 200
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.995

Field Name	Associated Context (ASC)
Description	Optional field xx.995 is contained in biometric data sample Record Types 10 and above that may have instances of Record Type-21 linked to it. Record Type-21 stores images and/or recordings that are not the actual source of the biometric data contained in another Record Type, but do show the context of the biometric data. An example would be a photograph of a glass that had latent prints on it. The actual image of the latent prints would appear in a Type-20 record, with the segmented individual images appearing in Type-13 records. This field consists of a maximum of 255 repeating subfields, each of which contains two information items, as described below. This is because there may be multiple instances of associated context records associated with a single biometric sample.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

Type-20 Source Representation Record

20.995_1

Field Name	*Associated Context Number (ACN)*
Description	The first information item for the Associated Context field for a particular Record Type-21. This is mandatory for each Field xx.995, when the field is used. It contains an index to a particular instance of a Type-21 record in the transaction. This same index value appears in the appropriate instance of Record Type-21 as Field 21.021: Associated context number / ACN. The value of the ACN shall be a sequentially assigned a positive integer starting from one and incremented by one, not toexceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= ACN <= 255; positive integer
Look Up Codes	n/a

20.995_2

Field Name	*Associated Segment Position (ASP)*
Description	The first information item is the associated segment position / ASP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= ASP <= 99; positive integer
Look Up Codes	n/a

20.996

Field Name	**Hash (HAS)**
Description	Optional field xx.996, is designed for use in Record types 10 and above with a Field xx.999 storing the biometric data. It is comprised of 64 characters representing hexadecimal values. Thus, each character may be a digit from “0” to “9” or a letter “A” through “F”. See the latest version of the Federal Information Processing Standard 180, Secure Hash Standard for information on computing SHA-256 hashes. At the time of this standard’s publication, FIPS 180-37 had been published. It is also possible to use Field xx.996 to contain the hash for data stored externally, which is referenced in Field 20.994: External file reference / EFR and /or Field 21.994: External file reference / EFR . The ability to store files externally is new to this version of the standard, and is only implemented for the two new record types referred to here. Use of the hash enables the receiver of the data to perform quick searches of large databases to determine if the data already exist in the database. It is not intended as an information assurance check.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	64 to 64
Char Types	H
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

Type-20 Source Representation Record

20.998

Field Name	Geographic Sample Acquisition Location (GEO)
Description	This field contains the location where the sample/original source/context information was acquired – not where it is stored.
Remarks	n/a
Format	n/a
Num Info Items	15
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

20.998_01

Field Name	*Universal Time Entry (UTE)*
Description	The coordinated universal time (UTC) where the biometric sample was collected. This time is independent of the actual time zone where the time and date is recorded. The date is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	If sample collection time is unknown, set it to "00000000000000Z."
Format	n/a
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

20.998_02

Field Name	*Latitude Degree Value (LTD)*
Description	The second information item is latitude degree value / LTD. This is a value that specifies the degree of latitude. The value shall be between -90 (inclusive) and +90 (inclusive). The degrees may be expressed as an integer (without a decimal) or a real number including decimals. If decimals are present, then minutes and seconds shall be empty. Examples: Buenos Aires, Argentina: -34 (with minutes LTM = 36) NIST, Gaithersburg, Maryland: 39.137627 (no LTM or LTS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 9
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-90 <= LTD <= 90
Look Up Codes	n/a

Type-20 Source Representation Record

20.998_03

Field Name	*Latitude Minute Value (LTM)*
Description	The third information item is latitude minute value / LTM. This is a value that specifies a minute of a degree. The value shall be between 0 (inclusive) to 60 (exclusive). The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall be empty. The minute value is empty, even if the degree value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTM < 60
Look Up Codes	n/a

20.998_04

Field Name	*Latitude Second Value (LTS)*
Description	The fourth information item is the latitude second value / LTS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTS < 60
Look Up Codes	n/a

20.998_05

Field Name	*Longitude Degree Value (LGD)*
Description	The fifth information item is the longitude degree value / LGD. It is a value that specifies the degree of a longitude. The value shall be between -180 (inclusive) and +180 (inclusive). If LTD is present, then LGD shall be present.The degrees may be expressed as whole numbers (without a decimal) or real numbers including decimals. If decimals are present, then minutes and seconds are empty. Examples: Buenos Aires, Argentina: -58 (with minutes LGM = 22) NIST, Gaithersburg, Maryland: -77.216032 (no LGM or LGS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-180 <= LGD <= 180
Look Up Codes	n/a

Type-20 Source Representation Record

20.998_06

Field Name	*Longitude Minute Value (LGM)*
Description	The sixth information item is the longitude minute value / LGM. It is a value that specifies a minute of a degree. The value shall be from 0 (inclusive) to 60 (exclusive).The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall not appear. The minute value is empty, even if the degree value is an integer. If LTM is present, then LGM shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGM < 60
Look Up Codes	n/a

20.998_07

Field Name	*Longitude Second Value (LGS)*
Description	The seventh information item is the longitude second value / LGS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer. If LTS is present, then LGS shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGS < 60
Look Up Codes	n/a

20.998_08

Field Name	*Elevation (ELE)*
Description	
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Minus Sign,Period
Value Constraints	-422.000 < ELE < 8848.000; real number
Look Up Codes	n/a

Type-20 Source Representation Record

20.998_09

Field Name	*Geodetic Datum Code (GDC)*
Description	The ninth information item is the geodetic datum code / GDC11. It is an alphanumeric value of 3 to 6 characters in length. This information item is used to indicate which coordinate system was used to represent the values in information items 2 through 7. If no entry is made in this information item, then the basis for the values entered in the first eight information items shall be WGS84, the code for the World Geodetic Survey 1984 version - WGS 84 (G873). See look up codes for values.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 6
Char Types	AN
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	GEOGRAPHIC COORDINATE DATUM CODES: AIRY = Airy AUST = Australian National BES = Bessel 1841 BESN = Bessel 1841 (Nambia) CLK66 = Clarke 1866 CLK80 = Clarke 1880 EVER = Everest FIS60 = Fischer 1960 (Mercury) FIS68 = Fischer 1968 GRS67 = GRS 1967 GRS80 = GRS 1980 HELM = Helmert 1906 HOUG = Hough INT = International KRAS = Krassovsky AIRYM = Modified Airy EVERM = Modified Everest FIS60M = Modified Fischer 1960 SA69 = South American 1969 WGS60 = WGS-60 WGS66 = WGS-66 WGS72 = WGS-72 WGS84 = WGS-84 / NAD-83 Other = <entry up to 6 characters>

20.998_10

Field Name	*Geographic Coordinate Universal Transverse Mercator Zone (GCM)*
Description	It is an alphanumeric value of 2 to 3 characters. This is a one or two digit UTM zone number followed by the 8 degree latitudinal band designator (which is a single letter).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	AN
Special Chars	None
Value Constraints	One or two digit UTM zone
Look Up Codes	n/a

Type-20 Source Representation Record

20.998_11

Field Name	*Geographic Coordinate Universal Transverse Mercator Easting (GCE)*
Description	The eleventh information item is the geographic coordinate universal transverse Mercator easting / GCE. It is an integer of 1 to 6 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 6
Char Types	N
Special Chars	None
Value Constraints	0 <= GCE; integer
Look Up Codes	n/a

20.998_12

Field Name	*Geographic Coordinate Universal Transverse Mercator Northing (GCN)*
Description	The twelfth information item is the geographic coordinate universal transverse Mercator northing / GCN. It is an integer of 1 to 8 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	N
Special Chars	None
Value Constraints	0 <= GCN; integer
Look Up Codes	n/a

20.998_13

Field Name	*Geographic Reference Text (GRT)*
Description	It is a free form text describing a street address or other physical location (such as ‘Corner of Washington and Madison, Geneva, NY’).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 150
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-20 Source Representation Record

20.998_14

Field Name	*Geographic Coordinate Other System Identifier (OSI)*
Description	A fourteenth optional information item geographic coordinate other system identifier / OSI allows for other coordinate systems. This information items specifies the system identifier. It is up to 10 characters in length. Examples are: • MGRS (Military Grid Reference System) • USNG (United States National Grid) • GARS (Global Area Reference System) • GEOREF (World Geographic Reference) • LANDMARK landmark (e.g. hydant) and position relative to the landmark.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.998_15

Field Name	*Geographic Coordinate Other System Value (OCV)*
Description	A fifteenth optional information item, is the geographic coordinate other system value / OCV. It shall only be present if OSI is present in the record. It can be up to 126 characters in length. If OSI is LANDMARK, OCV is free text and may be up to 126 characters. For details on the formatting of OCV for the other coordinate systems shown in OSI as examples, see http://earth-info.nga.mil/GandG/coordsys/grids/referencesys.html .
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

20.999

Field Name	**Source Representation Data (DATA)**
Description	If this field is used, Field 20.994: External file reference / EFR shall not be set. However, one of the two fields shall be present in all instances of this record type. See ANSI/NIST ITL for details this field entry. In Traditional format, this field shall be the last field in the record layout. It is mandatory for a 2D still image.
Remarks	See Section 7.2 of ANSI/NIST ITL 1-2011 for details.
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	B
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

Type-20 Source Representation Record

20.XXX

Field Name	Reserved for Future Use only by ANSI/NIST-ITL ()
Description	These Field IDs listed are reserved for future version of ANSI/NIST ITL use. These Field IDs are not for local use.
Remarks	20.022-099,901,905-992,997
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	Not Used
Look Up Codes	n/a

Type-21 Associated Context Record

21.001

Field Name	Record Header (LEN - for Traditional Encoding only)
Description	The record header appears as the first field (xx.001) in each Record Type. It contains information particular to the encoding format chosen, in order to enable proper reading of the record. In Traditional encoding, this field contains the record length in bytes (including all information separators). In NIEM-conformant XML encoding, this field contains the RecordCategoryCode, which is the numeric representation of the Record Type.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	N
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

21.002

Field Name	Information Designation Character (IDC)
Description	Each of the records present in a transaction, with the exception of the Type-1 record, shall include a field (xx.002) containing the information designation character / IDC. The value of the IDC shall be a sequentially assigned positive integer starting from zero and incremented by one up to a maximum of 99. IDC references are stated in Type-1 Field 1.003 Transaction content / CNT and shall be used to relate information items in the CNT field of the Type-1 record to the other records in the transaction. Two or more records may share a single IDC solely to identify and link together records that pertain to different representations of the same biometric trait.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	0 <= IDC <= 99 integer
Look Up Codes	n/a

21.004

Field Name	Source Agency (SRC)
Description	This is the identifier of the agency that actually created the record and supplied the information contained in it.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-21 Associated Context Record

21.005

Field Name	Associated Context Date (ACD)
Description	This optional field shall contain the date and time that the context representation contained in the record was captured.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	12 to 12
Char Types	N
Special Chars	None
Value Constraints	YYYYMMDDhhmm
Look Up Codes	n/a

21.015

Field Name	Associated Context Format (AFT)
Description	This is a mandatory field comprised of two information items. The first information item is mandatory. It is file type / FTY. If the associated context file is a digital file, this shall contain the suffix indicating the file type. If it is an analog file, enter 'ANALOG'. For digital data stored in other formats (such as digital tape), enter 'OTHER'. The second information item is decoding instructions / DEI. It is optional and contains free text up to 1000 characters.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

21.015_1

Field Name	*File Type (FTY)*
Description	The first information item is mandatory. It is file type / FTY. If the source representation is a digital file, this shall contain the suffix indicating the file type (such as JPG). If it is an analog file, enter 'ANALOG'. For digital data stored in other formats (such as digital tape), enter 'OTHER'.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 6
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-21 Associated Context Record

21.015_2

Field Name	*Decoding Instructions (DEI)*
Description	The second information item is decoding instructions / DEI. It is optional and contains free text up to 1000 characters.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 1,000
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

21.016

Field Name	**Segments (SEG)**
Description	This optional field shall consist of a subfield for each segment to be defined. Each subfield consists of a series of information items.
Remarks	n/a
Format	n/a
Num Info Items	5
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

21.016_1

Field Name	*Associated Segment Position (ASP)*
Description	The first information item is the associated segment position / ASP. This provides a unique index to a segmentation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	1 <= ASP <= 99 positive integer
Look Up Codes	n/a

Type-21 Associated Context Record

21.016_2

Field Name	*Internal File Reference Pointer (IPT)*
Description	The second information item is the internal file reference pointer/ IPT. It is set to 0 if the source representation is a single file. If the external file referenced in External file reference / EFR is a PDF, video, or presentation file, or has multiple locations where a sample may be located, this information item is the reference to the particular instance, such as page, video frame, or slide number used to derive the image transmitted in other record types. If a particular frame is chosen and there is no further image segmentation needed, the following information items shall not be used.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 15
Char Types	ANS
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

21.016_3

Field Name	*Number of Points (NOP)*
Description	Specifies the number of vertices.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 2
Char Types	N
Special Chars	None
Value Constraints	3 <= NOP <= 99 positive integer
Look Up Codes	n/a

21.016_4

Field Name	*Horizontal Point Offset (HPO)*
Description	The pixel counts to the right.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

Type-21 Associated Context Record

21.016_5

Field Name	*Vertical Point Offset (VPO)*
Description	The pixel counts down from the origin.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 5
Char Types	N
Special Chars	None
Value Constraints	positive integer
Look Up Codes	n/a

21.019

Field Name	**Time Index (TIX)**
Description	This is a conditional field. If the record contains video or audio, it shall contain the start and end times of segments within the file.For Type-20 or Type-21 records containing video or audio, this field shall contain two information items, time index start /TIS and time index end / TIE for the start and end times of segments within a video or audio file, measured in hh:mm:ss.sss where ss.sss refers to the seconds and milliseconds. This field is comprised of one or more subfields. Each repeating subfield corresponds to a single segment, with a starting and end time as separate information items.
Remarks	n/a
Format	n/a
Num Info Items	2
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

21.019_1

Field Name	*Time Index Start (TIS)*
Description	For Type-20 or Type-21 records containing video or audio, this information item of the Time Index field shall contain the start times of segments within a video or audio file, measured in hh:mm:ss.sss where ss.sss refers to the seconds and milliseconds.
Remarks	n/a
Format	hh:mm:ss.sss where ss.sss refers to the seconds and milliseconds
Num Info Items	0
Num Chars	12 to 12
Char Types	NS
Special Chars	Colon,Period
Value Constraints	TIS >= 0
Look Up Codes	n/a

Type-21 Associated Context Record

21.019_2

Field Name	*Time Index End (TIE)*
Description	For Type-20 or Type-21 records containing video or audio, this information item of the Time Index field shall contain the end times of segments within a video or audio file, measured in hh:mm:ss.sss where ss.sss refers to the seconds and milliseconds.
Remarks	n/a
Format	hh:mm:ss.sss where ss.sss refers to the seconds and milliseconds
Num Info Items	0
Num Chars	12 to 12
Char Types	NS
Special Chars	Colon,Period
Value Constraints	TIE > TIS
Look Up Codes	n/a

21.02

Field Name	**Comment (COM)**
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

21.021

Field Name	**Associated Context Number (ACN)**
Description	The first information item for the Associated Context field for a particular Record Type-21. This is mandatory for each Field xx.995, when the field is used. It contains an index to a particular instance of a Type-21 record in the transaction. This same index value appears in the appropriate instance of Record Type-21 as Field 21.021: Associated context number / ACN. The value of the ACN shall be a sequentially assigned a positive integer starting from one and incremented by one, not toexceed 255.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 3
Char Types	N
Special Chars	None
Value Constraints	1 <= ACN <= 255 positive integer
Look Up Codes	n/a

Type-21 Associated Context Record

21.100-21.900

Field Name	User Defined Fields (UDF)
Description	These are fields currently not described by the specification. Prior using these fields, coordination is required with the standard development body.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	21.100-21.900
Look Up Codes	n/a

21.902

Field Name	Annotation Information (ANN)
Description	This optional field is used to store annotation, logging, or processing information associated with one or more processing algorithms or latent workstations (other than the FBI developed ULW).
Remarks	n/a
Format	n/a
Num Info Items	4
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

21.902_1

Field Name	*Greenwich Mean Time (GMT)*
Description	This field provides a mechanism for expressing the date and time in terms of universal Greenwich Mean Time (GMT) units. This time is independent of the actual time zone where the time and date is recorded. The data is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	n/a
Format	YYYYMMDDHHMMSSZ - for Traditional Encoding
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

Type-21 Associated Context Record

21.902_2

Field Name	*Processing Algorithm Name / Version (NAV)*
Description	This field shall contain an unformatted text string of up to 64 characters identifying the name and version of the processing algorithm or workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

21.902_3

Field Name	*Algorithm Owner (OWN)*
Description	The third information item Type-9 Annotated Information field shall contain an unformatted text string of up to 64 characters with the contact information for the organization that owns the processing algorithm or latent workstation.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 64
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

21.902_4

Field Name	*Process Description (PRO)*
Description	The fourth and final information item of the Type-9 Annotated Information field shall contain an unformatted text string of up to 255 characters describing a process or procedure applied to the sample in this Type-XX record.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 255
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-21 Associated Context Record

21.993

Field Name	Source Agency Name (SAN)
Description	This is an optional field. It may contain up to 125 Unicode characters. It is the name of the agency referenced in Field xx.004: Source agency / SRC for record types 9-99.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 125
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

21.994

Field Name	External File Reference (EFR)
Description	This conditional field shall be used to enter the URL / URI or other unique reference to a storage location for all associated context files EXCEPT 2D still images. If this field is used, Field 21.999: Associated context data / DATA shall not be set. However, one of the two fields shall be present in all instances of this record type. It is an alphanumeric entry, with special characters allowed. A non-URL reference might be similar to: “Case 2009:1468 AV Tape 5”.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 200
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

21.996

Field Name	Hash (HAS)
Description	Optional field xx.996, is designed for use in Record types 10 and above with a Field xx.999 storing the biometric data. It is comprised of 64 characters representing hexadecimal values. Thus, each character may be a digit from “0” to “9” or a letter “A” through “F”. See the latest version of the Federal Information Processing Standard 180, Secure Hash Standard for information on computing SHA-256 hashes. At the time of this standard’s publication, FIPS 180-37 had been published. It is also possible to use Field xx.996 to contain the hash for data stored externally, which is referenced in Field 20.994: External file reference / EFR and /or Field 21.994: External file reference / EFR . The ability to store files externally is new to this version of the standard, and is only implemented for the two new record types referred to here. Use of the hash enables the receiver of the data to perform quick searches of large databases to determine if the data already exist in the database. It is not intended as an information assurance check.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	64 to 64
Char Types	H
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

Type-21 Associated Context Record

21.998

Field Name	Geographic Sample Acquisition Location (GEO)
Description	This field contains the location where the sample/original source/context information was acquired – not where it is stored.
Remarks	n/a
Format	n/a
Num Info Items	15
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

21.998_01

Field Name	*Universal Time Entry (UTE)*
Description	The coordinated universal time (UTC) where the biometric sample was collected. This time is independent of the actual time zone where the time and date is recorded. The date is YYYYMMDDhhmmssZ, where the Z is indicates the zone description of 0 hours.
Remarks	If sample collection time is unknown, set it to "00000000000000Z."
Format	n/a
Num Info Items	0
Num Chars	15 to 15
Char Types	AN
Special Chars	None
Value Constraints	Dependent upon encoding
Look Up Codes	n/a

21.998_02

Field Name	*Latitude Degree Value (LTD)*
Description	The second information item is latitude degree value / LTD. This is a value that specifies the degree of latitude. The value shall be between -90 (inclusive) and +90 (inclusive). The degrees may be expressed as an integer (without a decimal) or a real number including decimals. If decimals are present, then minutes and seconds shall be empty. Examples: Buenos Aires, Argentina: -34 (with minutes LTM = 36) NIST, Gaithersburg, Maryland: 39.137627 (no LTM or LTS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 9
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-90 <= LTD <= 90
Look Up Codes	n/a

Type-21 Associated Context Record

21.998_03

Field Name	*Latitude Minute Value (LTM)*
Description	The third information item is latitude minute value / LTM. This is a value that specifies a minute of a degree. The value shall be between 0 (inclusive) to 60 (exclusive). The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall be empty. The minute value is empty, even if the degree value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTM < 60
Look Up Codes	n/a

21.998_04

Field Name	*Latitude Second Value (LTS)*
Description	The fourth information item is the latitude second value / LTS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LTS < 60
Look Up Codes	n/a

21.998_05

Field Name	*Longitude Degree Value (LGD)*
Description	The fifth information item is the longitude degree value / LGD. It is a value that specifies the degree of a longitude. The value shall be between -180 (inclusive) and +180 (inclusive). If LTD is present, then LGD shall be present.The degrees may be expressed as whole numbers (without a decimal) or real numbers including decimals. If decimals are present, then minutes and seconds are empty. Examples: Buenos Aires, Argentina: -58 (with minutes LGM = 22) NIST, Gaithersburg, Maryland: -77.216032 (no LGM or LGS)
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	NS
Special Chars	Decimal,Minus Sign
Value Constraints	-180 <= LGD <= 180
Look Up Codes	n/a

Type-21 Associated Context Record

21.998_06

Field Name	*Longitude Minute Value (LGM)*
Description	The sixth information item is the longitude minute value / LGM. It is a value that specifies a minute of a degree. The value shall be from 0 (inclusive) to 60 (exclusive).The minute value may be expressed as an integer (without a decimal) or as a real number including decimals. If decimals are present then seconds shall not appear. The minute value is empty, even if the degree value is an integer. If LTM is present, then LGM shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGM < 60
Look Up Codes	n/a

21.998_07

Field Name	*Longitude Second Value (LGS)*
Description	The seventh information item is the longitude second value / LGS. This is a value that specifies a second of a minute. The integer shall be 0 (inclusive) to 60 (exclusive). The second value is empty, even if the minute value is an integer. If LTS is present, then LGS shall be present.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Decimal
Value Constraints	0 <= LGS < 60
Look Up Codes	n/a

21.998_08

Field Name	*Elevation (ELE)*
Description	
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	NS
Special Chars	Minus Sign,Period
Value Constraints	-422.000 < ELE < 8848.000; real number
Look Up Codes	n/a

Type-21 Associated Context Record

21.998_09

Field Name	*Geodetic Datum Code (GDC)*
Description	The ninth information item is the geodetic datum code / GDC11. It is an alphanumeric value of 3 to 6 characters in length. This information item is used to indicate which coordinate system was used to represent the values in information items 2 through 7. If no entry is made in this information item, then the basis for the values entered in the first eight information items shall be WGS84, the code for the World Geodetic Survey 1984 version - WGS 84 (G873). See look up codes for values.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	3 to 6
Char Types	AN
Special Chars	None
Value Constraints	see Look Up Codes
Look Up Codes	GEOGRAPHIC COORDINATE DATUM CODES: AIRY = Airy AUST = Australian National BES = Bessel 1841 BESN = Bessel 1841 (Nambia) CLK66 = Clarke 1866 CLK80 = Clarke 1880 EVER = Everest FIS60 = Fischer 1960 (Mercury) FIS68 = Fischer 1968 GRS67 = GRS 1967 GRS80 = GRS 1980 HELM = Helmert 1906 HOUG = Hough INT = International KRAS = Krassovsky AIRYM = Modified Airy EVERM = Modified Everest FIS60M = Modified Fischer 1960 SA69 = South American 1969 WGS60 = WGS-60 WGS66 = WGS-66 WGS72 = WGS-72 WGS84 = WGS-84 / NAD-83 Other = <entry up to 6 characters>

21.998_10

Field Name	*Geographic Coordinate Universal Transverse Mercator Zone (GCM)*
Description	It is an alphanumeric value of 2 to 3 characters. This is a one or two digit UTM zone number followed by the 8 degree latitudinal band designator (which is a single letter).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	2 to 3
Char Types	AN
Special Chars	None
Value Constraints	One or two digit UTM zone
Look Up Codes	n/a

Type-21 Associated Context Record

21.998_11

Field Name	*Geographic Coordinate Universal Transverse Mercator Easting (GCE)*
Description	The eleventh information item is the geographic coordinate universal transverse Mercator easting / GCE. It is an integer of 1 to 6 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 6
Char Types	N
Special Chars	None
Value Constraints	0 <= GCE; integer
Look Up Codes	n/a

21.998_12

Field Name	*Geographic Coordinate Universal Transverse Mercator Northing (GCN)*
Description	The twelfth information item is the geographic coordinate universal transverse Mercator northing / GCN. It is an integer of 1 to 8 digits.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 8
Char Types	N
Special Chars	None
Value Constraints	0 <= GCN; integer
Look Up Codes	n/a

21.998_13

Field Name	*Geographic Reference Text (GRT)*
Description	It is a free form text describing a street address or other physical location (such as ‘Corner of Washington and Madison, Geneva, NY’).
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 150
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

Type-21 Associated Context Record

21.998_14

Field Name	*Geographic Coordinate Other System Identifier (OSI)*
Description	A fourteenth optional information item geographic coordinate other system identifier / OSI allows for other coordinate systems. This information items specifies the system identifier. It is up to 10 characters in length. Examples are: • MGRS (Military Grid Reference System) • USNG (United States National Grid) • GARS (Global Area Reference System) • GEOREF (World Geographic Reference) • LANDMARK landmark (e.g. hydant) and position relative to the landmark.
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 10
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

21.998_15

Field Name	*Geographic Coordinate Other System Value (OCV)*
Description	A fifteenth optional information item, is the geographic coordinate other system value / OCV. It shall only be present if OSI is present in the record. It can be up to 126 characters in length. If OSI is LANDMARK, OCV is free text and may be up to 126 characters. For details on the formatting of OCV for the other coordinate systems shown in OSI as examples, see http://earth-info.nga.mil/GandG/coordsys/grids/referencesys.html .
Remarks	n/a
Format	n/a
Num Info Items	0
Num Chars	1 to 126
Char Types	U
Special Chars	Any
Value Constraints	None
Look Up Codes	n/a

21.999

Field Name	**Associated Context Data (DATA)**
Description	If this field is used, Field 21.994: External file reference / EFR shall not be set. However, one of the two fields shall be present in all instances of this record type. It is mandatory for a 2D still image.
Remarks	See Section 7.2 of ANSI/NIST ITL 1-2011 for details.
Format	n/a
Num Info Items	0
Num Chars	1 to -
Char Types	B
Special Chars	None
Value Constraints	None
Look Up Codes	n/a

Type-21 Associated Context Record

21.XXX

Field Name	Reserved for Future Use only by ANSI/NIST-ITL ()
Description	These Field IDs listed are reserved for future version of ANSI/NIST ITL use. These Field IDs are not for local use.
Remarks	21.003,006-014,017,018,022-099,901,903-992,995,997
Format	n/a
Num Info Items	0
Num Chars	n/a
Char Types	n/a
Special Chars	n/a
Value Constraints	n/a
Look Up Codes	n/a

BEI Reporting

Element Name	Additional Information
Description	This field contains additional information in forms of attachments that a nominator can include within the nomination report. These additional attachments support or enhance the case being made by the nominator for the requested action. It can include the following: - Photos - Documents - Interview Records - Phone Numbers
Remarks	The attachment(s) can be derived from Type-21 Associated Context Logical Record.
Format	n/a
Num Chars	1 to -
Char Type	B
Special Characters	None
Look Up Codes	n/a

Element Name	Alert Category
Description	The alert category is free-form text that provides the description of the nature of the individual.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	Alert Contact
Description	The agency and individual contact reference responsible for establishing the alert.
Remarks	n/a
Format	n/a
Num Chars	1 to 80
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	Alert Detail
Description	Special handling instructions or other information about the individual identified in an alert.
Remarks	n/a
Format	n/a
Num Chars	1 to 255
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	Alert Function
Description	An Indication of whether the alert on a biometric subject is currently set ON or OFF.
Remarks	n/a
Format	n/a
Num Chars	1 to 1
Char Type	N
Special Characters	None
Look Up Codes	ALERT FUNCTION CODES: 0 = Off 1 = On

Element Name	Alert Value
Description	The level of interest in a given biometric subject who has been flagged for alert.
Remarks	n/a
Format	n/a
Num Chars	1 to 1
Char Type	N
Special Characters	None
Look Up Codes	ALERT VALUE CODES: 1 = None 2 = Low Value 3 = Medium Value 4 = High Value

Element Name	Best Assessed Name
Description	The best assessed full name of the subject. This is a free-form text. This field can be derived from the 5 part name of "Biometric Subject Name".
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

Element Name	BEWL Added Date
Description	The date the subject was added to the Biometric Enabled WatchList (BEWL).
Remarks	n/a
Format	YYYYMMDD
Num Chars	8 to 8
Char Type	N
Special Characters	None
Look Up Codes	n/a

BEI Reporting

Element Name	BEWL Addition Approval Reason
Description	Reason nomination was approved for addition to the BEWL after someone else has adjudicated the nomination. This is free-form text.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

Element Name	BEWL Manager Information
Description	This free-text field is for information regarding the person serving as the coordinator or focal point for the BEWL. It should include the Name, Rank, Unit, Telephone Number and Email Address.
Remarks	Derivabled from the Operational Personnel with the role as 'WM'.
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	BEWL Nominating Country
Description	This is the country that has nominated the POI to the BEWL.
Remarks	It would be possible for one country to submit a nomination, and another country submits an update.
Format	n/a
Num Chars	3 to 3
Char Type	A
Special Characters	None
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

Element Name	BEWL Nomination Date
Description	Date at which the subject was nominated to the watchlist.
Remarks	n/a
Format	YYYYMMDD
Num Chars	8 to 8
Char Type	AN
Special Characters	None
Look Up Codes	n/a

BEI Reporting

Element Name	**BEWL Nomination Justification**
Description	A reason, fact, circumstance, or explanation that justifies the action requested in the BEWL Nomination.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

Element Name	**BEWL Nominator Information**
Description	This set of fields shall provide the information regarding the BEWL Nominator. The set consists of: Nominator Name, Nominator Rank, Nominator Phone, Nominator Email and Nominator Unit. If the nominator is a person, the information can be dervied from the set Operational Personnel with the Role as 'WN' for BEWL Nominator. If the nominator is an organization, the rank might be omitted.
Remarks	n/a
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

Element Name	***Nominator Name***
Description	The name of an individual or the organization that nominated the subject to the watchlist. This is free-form text. If the nominator is a person, the name can be derived from the Operational Personnel's 5 part name.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	***Nominator Rank***
Description	The military or civilian rank of the nominator.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	*Nominator Phone*
Description	The nominator contact telephone number.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

Element Name	*Nominator Email*
Description	The nominator contact email address.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

Element Name	*Nominator Unit*
Description	The name or identifier for the operational unit or organization the nominator belongs to.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

Element Name	**BEWL Purpose**
Description	This free-form text is to provide reason for the BEWL Encounter Notification Report.
Remarks	Example: (NATO U) THE PURPOSE OF THIS BEWL IS TO IDENTIFY PERSONS OF INTEREST (POI) THAT POSE A TREAT TO NATO INTERESTS AND OPERATIONS BY PROVIDING AN ALERT DURING BIOMETRIC SCREENING. THESE NOTIFICATIONS ARE GENERATED AFTER NEW BIOMETRIC COLLECTIONS.
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	**BEWL Removed Date**
Description	The date the subject was removed from the Biometric Enabled WatchList (BEWL).
Remarks	n/a
Format	YYYYMMDD
Num Chars	8 to 8
Char Type	N
Special Characters	None
Look Up Codes	n/a

BEI Reporting

Element Name	BIAR Author Information
Description	The information regarding the Biometric Intelligence Analysis Report (BIAR) Author. The information might contain the name, an ID, the contact telephone number and email address of the author.
Remarks	The information can be derived from the set 'Operational Personnel' with the Role as 'BA' for BIAR Author.
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	BIAR Number
Description	This mandatory field shall contain a unique number for each Biometric Intelligence Analysis Report. This field shall be comprised of the year in which the BIAR is produced, one hyphen, and a six alphanumeric characters. An example : 2011-A57891
Remarks	n/a
Format	YYYY-######
Num Chars	11 to 11
Char Type	ANS
Special Characters	Hyphen
Look Up Codes	n/a

Element Name	Biometric Modality Available Indicator
Description	This mandatory field shall carry a value between 0 and 5 to indicate if and which biometric modality is included on an individual.
Remarks	n/a
Format	n/a
Num Chars	1 to 1
Char Type	N
Special Characters	None
Look Up Codes	NATO BEWL MODALITY CODES: 0 = Unknown 1 = Face Image 2 = Fingerprint Image 3 = Iris Image 4 = Voice 5 = DNA

Element Name	Biometric Subject Alternate Name
Description	An alternate name used by the biometric subject.
Remarks	n/a
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

BEI Reporting

Element Name	***Person Alternate Name Category Code***
Description	Defines the type of name such as maiden name, nickname, alias.
Remarks	n/a
Format	n/a
Num Chars	3 to 4
Char Type	A
Special Characters	None
Look Up Codes	ALTERNATE NAME CATEGORY CODES: AKA = Alias MAID = Maiden NICK = Nickname

Element Name	***Name - One***
Description	The last name, surname or the family name of the person. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nasab name, a patronymic or series of patronymics.
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	***Name - Two***
Description	The personal name of a person. It is typically the first name in western culture. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Ism name, the main name of an Arab person; his or her personal name (e.g. "Kareem" or "Fatimah").
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	***Name - Three***
Description	The middle name of a person. It is placed between the first given name and the surname. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Kunya name, the person's first-born son is used as a substitute for the ism.
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	*Name - Four*
Description	A name of a person to represent a the fourth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fourth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nisbah name, describes a person's occupation, geographic home area, or descent (tribe, family, etc.).
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Name - Five*
Description	A name of a person to represent a the fifth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fifth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Laqab name, intended as a description of the person. Also can be used for the honorific title.
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Name Validity*
Description	This field defines the validity of the individual's name.
Remarks	n/a
Format	n/a
Num Chars	3 to 3
Char Type	A
Special Characters	None
Look Up Codes	NAME VALIDITY CODES: DOC = Documented SRT = Self Reported ORT = Other Reported

Element Name	*Comment*
Description	The optional Comment field appears in many record types and may be used to insert free text information. It is not reserved exclusively for log-related information but has historically often been used for this purpose. It is limited to a maximum of 126 characters. This maximum size was established in order to maintain consistency across encodings. The maximum size differed in the 2007 and 2008 versions of the standard.
Remarks	n/a
Format	n/a
Num Chars	1 to 126
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	**Biometric Subject Birth Date**
Description	The biometric subject's complete date of birth.
Remarks	Pad any portion of the date with zero's when unknown or not used. For example, 00000000 when the field is mandatory, but the date is unknown. 20100000 when the year is known but month and day are unknown or not used.
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

Element Name	***Birth Date***
Description	The 8 digit calendar date for the person's birth date.
Remarks	n/a
Format	YYYYMMDD
Num Chars	8 to 8
Char Type	N
Special Characters	None
Look Up Codes	n/a

Element Name	***Date Validity***
Description	This field defines the validity of the date.
Remarks	n/a
Format	n/a
Num Chars	3 to 3
Char Type	A
Special Characters	None
Look Up Codes	DATE VALIDITY CODES: DOC = Documented EST = Estimated SRT = Self Reported

Element Name	***Calendar Type***
Description	The type of calendar the date is being specified in (e.g. Gregorian and Islamic).
Remarks	n/a
Format	n/a
Num Chars	1 to 1
Char Type	A
Special Characters	None
Look Up Codes	CALENDAR TYPE CODES: G = Gregorian I = Islamic C = Chinese H = Hebrew

BEI Reporting

Element Name	**Biometric Subject Citizenship**
Description	The country of which the biometric subject is a citizen. NATO STANAG 1059 alpha3 country codes are used.
Remarks	n/a
Format	n/a
Num Chars	3 to 3
Char Type	A
Special Characters	None
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

Element Name	**Biometric Subject Comment**
Description	The comments or remarks on the biometric subject for which the biometric sample was collected.
Remarks	n/a
Format	n/a
Num Chars	1 to 250
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	**Biometric Subject Group Membership**
Description	Provide summary information on organization(s) the biometric subject is a member of.
Remarks	n/a
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

Element Name	***Group Name***
Description	The name of the group that the biometric subject is associated with.
Remarks	The following codes shall be used for the respective group. Otherwise, this field remains as free-form text.
Format	n/a
Num Chars	1 to 100
Char Type	n/a
Special Characters	n/a
Look Up Codes	GROUP NAME CODES: JAM = Jaysh al-Mahdi AQI = Al-Qaeda in Iraq TALIBAN = Taliban AQ = Al-Qaeda HQN = Haqqani Network HIG = Hizb-i-Islami - Gulbuddin BMG = Balkan Mujahedin Group IRA = Irish Republican Army ETA = Euskadi ta Askatasuna (Basque Fatherland and Liberty) FARC = Revolutionary Armed Forces of Colombia HAMAS = Harakat al-Muqawamah al-Islamiyyah (Islamic Resistance Movement) FATAH = Movement for the National Liberation of Palestine HEZBOLLAH = HEZBOLLAH

BEI Reporting

Element Name	*Group Type*
Description	The type of group that the biometric subject is associated with.
Remarks	n/a
Format	n/a
Num Chars	3 to 4
Char Type	A
Special Characters	None
Look Up Codes	GROUP TYPE CODES (NATO USE): TRIB = Tribe GANG = Gang REL = Religious SIG = Special Interest Group POL = Political Group TER = Terrorist Group XXX = Undetermined SOC = Social Networking Group INS = Insurgent Group

Element Name	*Group Member Role*
Description	The role within the associated group that the biometric subject is acting as.
Remarks	n/a
Format	n/a
Num Chars	1 to 100
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	**Biometric Subject Name**
Description	The name of the biometric subject. This is a set comprised of 7 information items: Name-One, Name-Two, Name-Three, Name-Four, Name-Five, Name Validity and Transliteration Code.
Remarks	n/a
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

Element Name	*Name - One*
Description	The last name, surname or the family name of the person. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nasab name, a patronymic or series of patronymics.
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	*Name - Two*
Description	The personal name of a person. It is typically the first name in western culture. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Ism name, the main name of an Arab person; his or her personal name (e.g. "Kareem" or "Fatimah").
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Name - Three*
Description	The middle name of a person. It is placed between the first given name and the surname. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Kunya name, the person's first-born son is used as a substitute for the ism.
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Name - Four*
Description	A name of a person to represent a the fourth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fourth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nisbah name, describes a person's occupation, geographic home area, or descent (tribe, family, etc.).
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Name - Five*
Description	A name of a person to represent a the fifth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fifth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Laqab name, intended as a description of the person. Also can be used for the honoric title.
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	*Name Validity*
Description	This field defines the validity of the individual's name.
Remarks	n/a
Format	n/a
Num Chars	3 to 3
Char Type	A
Special Characters	None
Look Up Codes	NAME VALIDITY CODES: DOC = Documented SRT = Self Reported ORT = Other Reported

Element Name	*Transliteration Code*
Description	An encoding to transcribe from one alphabet to another.
Remarks	n/a
Format	n/a
Num Chars	4 to 6
Char Type	A
Special Characters	None
Look Up Codes	TRANSLITERATION CODES: Arabic = Arabic Hindi = Hindi Urdu = Urdu NONE = No Transliteration Applied

Element Name	**Collected Identification**
Description	Information about an identification issued by an agency. It is a set of fields consists of Identification Issuance Authority Type, Name of Identification, Identification Identifier, Issuance Organization, Issuance Office, Issuance Date, Expiration Date, Comment.
Remarks	n/a
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

Element Name	*Identification Issuance Authority Type*
Description	A kind of authority that issued the identification. (E.G. Government Issued Identification, Military Issued Identification, etc.)
Remarks	n/a
Format	n/a
Num Chars	3 to 3
Char Type	A
Special Characters	None
Look Up Codes	IDENTIFICATION ISSUANCE AUTHORITY CATEGORY CODES: GOV = Government Issued Identification MIL = Military Issued Identification OTH = Other Organization Issued Identification

BEI Reporting

Element Name	*Identification Type*
Description	The type of the person's identification (e.g. National Identification Number, Passport, Driver's License, etc.) Use codes listed below for the common collected identification type. For other types of identification, enter the name of the identification document.
Remarks	n/a
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	COMMON COLLECTED IDENTIFICATION TYPE CODES: PASS = Passport Information SSN = Social Security Number VISA = Visa Number NID = National Identification Number DLN = Driver's License Number

Element Name	*Collected Identification Identifier*
Description	The identifying value for the issued identification. Examples include passport number, ssn, or drivers license number. This field is free form text.
Remarks	n/a
Format	n/a
Num Chars	1 to 100
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Collected Identification Issuance Organization*
Description	The organization or system that issued the identification collected. This field is free form text and contains values such as “US Government”, a country name, a state name, an agency name.
Remarks	n/a
Format	n/a
Num Chars	1 to 100
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Collected Identification Issuance Date*
Description	The date when the collected identification was issued.
Remarks	n/a
Format	YYYYMMDD
Num Chars	8 to 8
Char Type	N
Special Characters	None
Look Up Codes	n/a

BEI Reporting

Element Name	*Collected Identification Expiration Date*
Description	The date the issued identification expires.
Remarks	n/a
Format	YYYYMMDD
Num Chars	8 to 8
Char Type	N
Special Characters	None
Look Up Codes	n/a

Element Name	*Collected Identification Issuance Office*
Description	A location or branch identifier for the office or system which issued the identification. This field is free form text. (E.G. The location where the biometric subject receives their card after verification.)
Remarks	n/a
Format	n/a
Num Chars	1 to 100
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Collected Identification Comment*
Description	The notes and comments concerning the issued identification collected.
Remarks	n/a
Format	n/a
Num Chars	1 to 250
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	**Collection Location**
Description	This free-text field provides the geographic location where the biometric sample was acquired from the subject. This field can be derived from the following sets: - Geographic Coordinate Latitude/Longitude (LAT/LONG) - Military Grid Reference System (MGRS)
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	Collection Reason
Description	The purpose for which a biometric sample was obtained from the biometric subject.
Remarks	n/a
Format	n/a
Num Chars	1 to 300
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	Contextual Summary
Description	This is the summary provided within the BEWL Encounter Notification Report. It is a free-form text that contains both contextual and associated information regarding the subject.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	Declassify Instruction
Description	Instructions concerning the declassification of the information in the document.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	Detainee Reference Number
Description	A reference number assigned to a NATO detainee.
Remarks	n/a
Format	n/a
Num Chars	1 to 50
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

Element Name	Detainment Reason
Description	This is free-form text containing the reason for detaining a person of interest within the BEWL.
Remarks	n/a
Format	n/a
Num Chars	1 to 300
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	Detainment Status
Description	This is a free text field in which intelligence analysts provide a summary of the POIs detainment status.
Remarks	For example, 'subject has not been detained' or 'subject detained by XXX on DATE' or 'as of DATE, subject is being held at XXX,' etc.
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	Document Reference
Description	Reference to document being corrected by this notification or Reference to the authorization which directs the publishing of these reports.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	Encounter Comment
Description	The comments or notes on the encounter mission in which the biometric sample was collected including any extenuating circumstances of the encounter.
Remarks	n/a
Format	n/a
Num Chars	1 to 1,000
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	Encounter Date
Description	The date the biometric was acquired from the subject.
Remarks	n/a
Format	n/a
Num Chars	8 to 8
Char Type	N
Special Characters	None
Look Up Codes	n/a

BEI Reporting

Element Name	**Geographic Coordinate Latitude/Longitude**
Description	This field contains the longitude and latitude at which the submission was collected. It consists of Latitude Degree, Latitude Minute, Latitude Second, Longitude Degree, Longitude Minute, and Longitude Second. Both Latitude Degree and Longitude Degree are required if this field is present. Decimal values are allowed in each information item. If a decimal value is used in a particular information item, the more granular information item shall be empty (e.g., if Longitude Minutes equals 45.67, Longitude Seconds shall be empty). The datum for this field is indicated in Geographic Coordinate Datum (DATUM_ID).
Remarks	n/a
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

Element Name	***Latitude Degree***
Description	This field contains the latitude at which the submission was collected. The data is in degrees in the range +90 to -90. The plus sign may be omitted. Decimal values are allowed.
Remarks	n/a
Format	n/a
Num Chars	1 to 9
Char Type	NS
Special Characters	Hyphen,Period,Plus Sign
Look Up Codes	n/a

Element Name	***Latitude Minute***
Description	This field contains the geographic location latitude. The data is in minutes in the range from 0 to less than 60. Decimal values are allowed.
Remarks	n/a
Format	n/a
Num Chars	1 to 8
Char Type	NS
Special Characters	Period
Look Up Codes	n/a

Element Name	***Latitude Second***
Description	This field contains the geographic location latitude. The data is in seconds in the range from 0 to less than 60. Decimal values are allowed.
Remarks	n/a
Format	n/a
Num Chars	1 to 8
Char Type	NS
Special Characters	Period
Look Up Codes	n/a

BEI Reporting

Element Name	*Longitude Degree*
Description	This field contains the geographic location longitude. The data is in the range of +180 to -180. The plus sign may be omitted. Decimal values are allowed.
Remarks	n/a
Format	n/a
Num Chars	1 to 10
Char Type	NS
Special Characters	Period,Plus Sign
Look Up Codes	n/a

Element Name	*Longitude Minute*
Description	This field contains the geographic location longitude. The data is in minutes in the range from 0 to less than 60. Decimal values are allowed.
Remarks	n/a
Format	n/a
Num Chars	1 to 8
Char Type	NS
Special Characters	Period
Look Up Codes	n/a

Element Name	*Longitude Second*
Description	This field contains the geographic location latitude. The data is in seconds in the range from 0 to less than 60. Decimal values are allowed.
Remarks	n/a
Format	n/a
Num Chars	1 to 8
Char Type	NS
Special Characters	Period
Look Up Codes	n/a

Element Name	**Identification Date**
Description	Date of the first enrollment.
Remarks	n/a
Format	YYYYMMDD
Num Chars	8 to 8
Char Type	N
Special Characters	None
Look Up Codes	n/a

Element Name	**Intelligence Analysis**
Description	The freeform text for a intelligence analysis including assessments, source reporting, derogatory information, and other classified information.
Remarks	n/a
Format	n/a
Num Chars	1 to 1,000
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	**Intelligence Overview**
Description	This free-text field contains the executive summary for the Biometric Intelligence Analysis Report (BIAR). It also provides information that can be derived from the following fields: - Biometric Subject Citizenship - NATO Area of Responsibility - Detainment Reason - Alert Function - Alert Value - Alert Contact - Alert Detail
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	**Intelligence Value**
Description	This set consists of 3 information items which assessed usefulness of intelligence derived from biometric subject in the Biometric Intelligence Analysis Report (BIAR). The 3 information items are: Assigned Date, NATO AOR and the Intelligence Value Code.
Remarks	n/a
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

Element Name	***Assigned Date***
Description	The date the level/value was assigned.
Remarks	n/a
Format	YYYYMMDD
Num Chars	8 to 8
Char Type	N
Special Characters	None
Look Up Codes	n/a

Element Name	***NATO Area of Responsibility***
Description	The Area of Responsibility (AOR) is the geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. Within NATO, SACEUR is permanently responsible for all military action-taking place in the area encompassing NATO borders. SACEUR is also responsible for NATO/NATO-lead operations outside NATO borders when directed by the NAC. The other levels of command have no specific AOR but SACEUR defines their geographic JOA and AOO.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	A
Special Characters	None
Look Up Codes	n/a

BEI Reporting

Element Name	*Intelligence Value Code*
Description	This field shall contain the intelligence value code which assessed usefulness of intelligence derived from biometric subject.
Remarks	n/a
Format	n/a
Num Chars	3 to 6
Char Type	A
Special Characters	None
Look Up Codes	LEVEL/VALUE CODES: HIGH = High MEDIUM = Medium LOW = Low NONE = None

Element Name	**Last Modified in BEWL Date**
Description	The date the information regarding a subject was last modified in the Biometric Enabled WatchList (BEWL).
Remarks	n/a
Format	YYYYMMDD
Num Chars	8 to 8
Char Type	N
Special Characters	None
Look Up Codes	n/a

Element Name	**Military Grid Reference System**
Description	The value of the coordinate at which the fingerprint sample was collected. A MGRS coordinate is in the form of a three character grid Zone Designation, followed by a two letter grid square designator and a four, six, eight, 10 or 12 digit coordinate (e.g. 42BNG112343556789).
Remarks	Also see http://earth-info.nga.mil/GandG/coordsys/grids/referencesys.html
Format	<3 char grid zone><2 letter grid square><4,6,8,10 or 12 digit coordinate>
Num Chars	3 to 17
Char Type	AN
Special Characters	None
Look Up Codes	n/a

Element Name	**NATO Area of Operation**
Description	An operational area defined by a JFC for land or maritime forces to conduct military activities. Normally, an area of operations does not encompass the entire JOA of the JFC, but is sufficient in size for the JFC to accomplish assigned missions and protect forces.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	NATO Area of Responsibility
Description	The Area of Responsibility (AOR) is the geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. Within NATO, SACEUR is permanently responsible for all military action-taking place in the area encompassing NATO borders. SACEUR is also responsible for NATO/NATO-lead operations outside NATO borders when directed by the NAC. The other levels of command have no specific AOR but SACEUR defines their geographic JOA and AOO.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	A
Special Characters	None
Look Up Codes	n/a

Element Name	NATO High Value Individual
Description	This is an alpha field indicating whether the individual on the BEWL is a NATO HVI. Submit a “Y” for yes or an “N” for no.
Remarks	n/a
Format	n/a
Num Chars	1 to 2
Char Type	A
Special Characters	None
Look Up Codes	YES_NO CODES: Y = Yes N = No

Element Name	NATO Task Force
Description	This free-text field shall contain the name and associated number designator for the NATO Task Force involved with this data. This data element and the name of the Task Force shall be theater specific.
Remarks	n/a
Format	n/a
Num Chars	1 to 20
Char Type	AN
Special Characters	None
Look Up Codes	n/a

Element Name	NATO Theatre
Description	A theatre is a broad geographical area defined by the SACEUR, which includes and surrounds the JOA, where strategic and operational activity may take place in support of the JFCs’ mission.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	**NATO Warrant Package**
Description	Field for a description, pointer, or number that points to a warrant package developed and used to detain personnel who pose a security threat to NATO forces. This is a free-form text field.
Remarks	n/a
Format	n/a
Num Chars	1 to 300
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

Element Name	**Nomination Action Request**
Description	This field/label contains the requested action for the nomination application on an individual under consideration to be placed on the BEWL.
Remarks	n/a
Format	n/a
Num Chars	1 to 1
Char Type	N
Special Characters	None
Look Up Codes	APPLICATION REQUEST CODES: 0 = Watch List Addition 1 = Watch List Transfer 2 = Watch List Removal

Element Name	**Operational Personnel**
Description	This set of fields shall identify the name information, contact information, unit/organization, role, rank/grade, identification type and the identification identifier of the personnel assigned to specific day-to-day responsibility for program activities.
Remarks	n/a
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

Element Name	***Operational Personnel Unit/Organization***
Description	The name or identifier for the operational unit or organization the Operational Personnel belongs to.
Remarks	n/a
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	*Operational Personnel Role*
Description	The role of the Operational Personnel.
Remarks	n/a
Format	n/a
Num Chars	2 to 2
Char Type	A
Special Characters	None
Look Up Codes	NATO OPERATIONAL PERSONNEL ROLE CODES: AO = ABIS Operator RA = Requesting Authority AA = Approval Authority EN = Enroller LS = Latent Submitter LT = Latent Technician SR = Screener SP = Sponsor BC = Biometric Sample Collector WN = BEWL Nominator WM = BEWL Manager BA = BIAR Author BR = BIAR Reviewer

Element Name	*Rank/Grade Code*
Description	The military rank or civilian rank of the person.
Remarks	n/a
Format	n/a
Num Chars	1 to 20
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

Element Name	*Operational Personnel Identifier Type*
Description	The type of unique identifier of the Operational Personnel.
Remarks	n/a
Format	n/a
Num Chars	3 to 7
Char Type	ANS
Special Characters	n/a
Look Up Codes	n/a

Element Name	*Operational Personnel Identifier*
Description	The value of the unique identifier of the Operational Personnel, such as Social Security Number.
Remarks	n/a
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	*Name - One*
Description	The last name, surname or the family name of the person. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nasab name, a patronymic or series of patronymics.
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Name - Two*
Description	The personal name of a person. It is typically the first name in western culture. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Ism name, the main name of an Arab person; his or her personal name (e.g. "Kareem" or "Fatimah").
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Name - Three*
Description	The middle name of a person. It is placed between the first given name and the surname. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Kunya name, the person's first-born son is used as a substitute for the ism.
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Name - Four*
Description	A name of a person to represent a the fourth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fourth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Nisbah name, describes a person's occupation, geographic home area, or descent (tribe, family, etc.).
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	*Name - Five*
Description	A name of a person to represent a the fifth name for a culture using four or five names (e.g., a tribal or village name.) It will be given the ranking of fifth importance of naming in the culture from which the person is associated. Enter "UNKNOWN" if this information item is required and not available at the time of collection.
Remarks	Can be mapped to the Arabic Laqab name, intended as a description of the person. Also can be used for the honorific title.
Format	n/a
Num Chars	1 to 50
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	*Phone Number*
Description	The full telephone number including international country code and area code. Space and hypen are allowed.
Remarks	n/a
Format	n/a
Num Chars	1 to 50
Char Type	ANS
Special Characters	Blank,Hyphen
Look Up Codes	n/a

Element Name	*Email Address*
Description	Identifies an email box to which email messages are delivered.
Remarks	n/a
Format	n/a
Num Chars	1 to 254
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

Element Name	**Recommended Action**
Description	This free-form text describes what action, if any, is to be carried out upon encountering the subject.
Remarks	n/a
Format	n/a
Num Chars	1 to 300
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	**Repository Reference Number**
Description	This field captures the unique reference number for the subject assigned by the NATO's country repository. It consists of 3 information items: Country Code, Designated Repository Code and the Repository Assigned Reference Identifier.
Remarks	n/a
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

Element Name	***Country Code***
Description	The NATO STANAG 1059 alpha3 country code.
Remarks	n/a
Format	n/a
Num Chars	3 to 3
Char Type	A
Special Characters	None
Look Up Codes	NATO COUNTRY CODES: NATO Alpha3 Country Codes = See NATO STANAG 1059

Element Name	***Designated Repository Code***
Description	The numeric code for the designation of the repository.
Remarks	n/a
Format	n/a
Num Chars	1 to 4
Char Type	N
Special Characters	None
Look Up Codes	n/a

Element Name	***Repository Assigned Reference Identifier***
Description	This is the unique identifier assigned by a repository for the enrolled subject.
Remarks	n/a
Format	n/a
Num Chars	1 to 50
Char Type	ANS
Special Characters	Forward Slash
Look Up Codes	n/a

Element Name	**Sensor**
Description	Name of the collection sensor or a group of collections (for example BAT, BISA, etc.). In certain circumstances, descriptors beyond sensor name are used such as "Gitmo" in addition to device name such as "BAT". This is not the Make/Model/Serial Number of the sensor.
Remarks	n/a
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

BEI Reporting

Element Name	Source of Classification
Description	Originally Classified Documents. Every originally classified document must have a "Classified by" line placed on the face of the document that identifies the original classification authority responsible for classification of the information it contains. The original classification authority shall be identified by name or personal identifier and position title. If the information normally included on the "Classified by" line would reveal classified information not evident from the rest of the document, the "Classified by" line should be completed with an unclassified personal identifier that can be traced through secure channels.
Remarks	Example: CLASSIFIED BY: ASD(C3I) or CLASSIFIED BY: S-3, 504 MIB
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	Subject Alternate Name
Description	This is the subject's alternate full name. This is free-form text and can be derived from the 5 part name of "Biometric Subject Alternate Name".
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	ANS
Special Characters	Any
Look Up Codes	n/a

Element Name	Subject Identification
Description	This free-form text contains 1 or more identification assigned to the subject. It can be derived from the following sets: - Collected Identification - Repository Reference Number - Detainee Reference Number
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

Element Name	Subject Name
Description	The full name of the subject collected during an encounter. This is free-form text and can be derived from the 5 part name of "Biometric Subject Name".
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	U
Special Characters	Any
Look Up Codes	n/a

BEI Reporting

Element Name	**Subject Photograph**
Description	A photograph of the subject in frontal pose. The photograph can be derived from a Type-10 logical record.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	B
Special Characters	None
Look Up Codes	n/a

Element Name	**Threat Level**
Description	This set consists of 3 information items which describes the threat level associated with the biometric subject described and analyzed in the Biometric Intelligence Analysis Report (BIAR). The 3 information items are: Assigned Date, NATO AOR and the Threat Level Code.
Remarks	n/a
Format	n/a
Num Chars	n/a
Char Type	n/a
Special Characters	n/a
Look Up Codes	n/a

Element Name	***Assigned Date***
Description	The date the level/value was assigned.
Remarks	n/a
Format	YYYYMMDD
Num Chars	8 to 8
Char Type	N
Special Characters	None
Look Up Codes	n/a

Element Name	***NATO Area of Responsibility***
Description	The Area of Responsibility (AOR) is the geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. Within NATO, SACEUR is permanently responsible for all military action-taking place in the area encompassing NATO borders. SACEUR is also responsible for NATO/NATO-lead operations outside NATO borders when directed by the NAC. The other levels of command have no specific AOR but SACEUR defines their geographic JOA and AOO.
Remarks	n/a
Format	n/a
Num Chars	1 to -
Char Type	A
Special Characters	None
Look Up Codes	n/a

BEI Reporting

Element Name	*Threat Level Code*
Description	This field shall contain the threat level code associated with the biometric subject described and analyzed in the BIAR.
Remarks	n/a
Format	n/a
Num Chars	3 to 6
Char Type	A
Special Characters	None
Look Up Codes	LEVEL/VALUE CODES: HIGH = High MEDIUM = Medium LOW = Low NONE = None

Element Name	**Transaction Control Number**
Description	This mandatory field shall contain the Transaction Control Number as assigned by the originating agency. A unique alphanumeric control number shall be assigned to each transaction. For any transaction that requires a response, the respondent shall refer to this number in communicating with the originating agency.
Remarks	n/a
Format	n/a
Num Chars	40 to 40
Char Type	ANS
Special Characters	Hyphen
Look Up Codes	n/a